ALPS ELECTRIC CO., LTD.

Green Procurement Standards

(Appendix)

Friendly to people, friendly to nature.

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ALPS ELECTRIC CO.,LTD.

CONTENTS

Explanation and procedure of self-evaluation sheet for supplier of environmental management [Ver.4.1]

1. Explanation and procedure

This check sheet is prepared by Alps Electric requests its suppliers to take actions according to the action item list described in the guideline which an article management promotion conference (JAMP) publishes.
It explain

2.Definition of Terms

(1) Sub-contractor
Manufacturer who produces goods in accordance with all manufacturing details decided by the client, such as final specifications,
designs to meet final specifications, material selection, production method, and inspection method

(2) Supplier
Manufacturer who produces goods in accordance with all manufacturing details decided on their own, such as designs to meet final specifications, material selection, production method, and inspection method

(3) Prohibited substances
Substances banned from use in products and parts by laws, customer requirements, etc.

(4) Subsidiary materials, auxiliary materials
Used materials which are not controlled by product composition parts list, however used in manufacturing and consists delivered products.
Example: ″PP band″ and ″grease, adhesive, tape, solder″, ink which is used for printing of packing materials, paint, label, ink for label, ink for writing, ink ribbon, magic ink, printer ink, etc.

3.Evaluation Criteria

1) Evaluation for Each Action Item

Regarding whether the systems for managing chemical substances in products are properly constructed and operated, evalution is carried out for each Action Item and Action Details according to the following four levels based on the Required Level.

Conforming: In order to satisfy an enforcement item, it is necessary to perform employment (measure) based on a rule (mechanism) and a rule. Each question to Action items is fundamentally set up from the viewpoint of a rule, and/or a viewpoint of employment. either through documentation or records.If employment based on a rule is appropriately carried out to the contents of the question, consider it as "conformity." The employment based on a rule needs to be able to check objective.

Partial conformance:When employment which satisfies the contents of "question" substantially is carried out or a rule or a part of employment has a defect, consider it as "Partial conformance". In any case, it is important that it is in the state for which the defect is coped with in actual employment and which applies to conformity correspondingly. To be able to check objective is required like the case of "Conforming", to judge "Partial conformance", it is necessary to clarify a still more deficient point, and an improvement plan needs to be shown.

Non-Conforming: When there is no rule corresponding to "question", and/or when employment is not performed, about the question concerned, consider it as "Nonconforming".

Not Applicable: When "Action items" or a "question" does not correspond to an organization, can remove for evaluation as "Not Applicable." However, the explanation of a basis judged to be "Not Applicable" is required.

Table 1: List of Evaluation Criteria

	Systems for Fulfilling the Action Details(Rules)	Activities for Fulfilling Action Details (Implementation)
Conforming	0	0
Partial conformance	0	#
	#	0
	0	x
	x	0
	#	#
	#	x
	#	x
	x	#
Non-Conforming	x	x

0:Required Level is satisfied
#: Some actions are performed but partially insufficient
x: Required Level is not satisfied

(2) Rank Evaluation

Scoring of self-evaluation sheet for a supplier

Scoring of "Self-evaluation sheet for a supplier" should be done by following the procedures below. Ranking is to be given by the rules described in the table 2 based on the grade after calculating obtained points by the formula described later.

Based on the Required Level of the "Action Item List," the scores are as follows: "Conforming" = 3 pts., "Partial conformance" = 1 pts., "Non-Conforming" = 0 pts. The points are added to calculate the total score. When the Action Items or Action Details are not applicable to the company's management, the relevant column shall be left blank. Because there are 94 items in total, when all Required Levels are "Conforming," the full marks shall be 282 points. Since the full marks change when there are Not Applicable columns, the full marks are converted into 100 points using the following method.

$$\frac{\text{Actual score}}{\text{Number of relevant columns} * 3} * 100 = \text{Converted into full marks of 100 points (Evaluation points)}$$

When 94 items are applicable among the 90 Required Level items and the score is 250 points:

$$\frac{250}{90*3} * 100 = \frac{250}{270} * 100 = 92 \text{ points}$$

Note: The evaluation points above do not indicate a passing mark for the total evaluation. The total evaluation is determined by taking the conditions for "Non-Conforming" and "Partial conformance" into account.

Table 2: Ranking based on the grade

Rank-A	the grade should be 100 without nonconformity
Rank-B	80 to 99 without nonconformity and with corrective action plans
Rank-C	50 to 79 without nonconformity and with corrective action plans
Rank-D	less than 49 points or with nonconformity

4. Procedure for preparation

Procedure-(1):

Make judgement for each question number with judgement criteria of section 3. 1), and select the result from pulldown list of "Self-evaluation result".
In case of hand writing, fill out the judgement result in "Self-evaluation result".(Conforming, Partial conformance, Non-Conforming, Not Applicable)
When you select Conforming, Partial conformance, Non-Conforming or Not Applicable, consider column of "Sample Answer / Note & Point of Management" and make judgement.

Procedure-(2):

Fill out verified objective facts or documents in column "Answer" also.
When you select Not Applicable, fill in the reasons as much as possible.
Refer to "Sample Answer / Note & Point of Management" to fill in name of Records or documents.
Note: If you attach verified objective documents as evidence, add reference number to the documents, and fill in the reference number in column for "Answer".

Procedure-(3):

In the space of "Score", the point is displayed after it is calculated automatically according to the judgment result for each requirement level as described in Procedure-(1).
In case of hand writing, follow below scoring procedure of Note and fill in score. However, in case of Not Applicable, make blank in column "Score".

Note: scoring system: when the judgment result is "conforming", the point is 3, when it is "Partial conformance", it is 1, and when it is "non-conforming", it is 0. If it is not applicable, nothing should be entered in the space.

Procedure-(4):

Total value is calculated (There is no display). Please calculate total value in case of hand writing.
The full marks value in case of all the correspondences of the item (When evaluating it) becomes 282 points.
This total value is made a molecule, and the integral value in which 100 values in which "Values three times the graded number of items" is assumed to be a denominator are multiplied is assumed to be "Points in evaluation".

Procedure-(5):

It judges by automatic calculation based on given criterion, and the rank is displayed in "Rank" column.
Please fill in the rank on the rank column at longhand.

Note: When the judgment result is "Partial conformance",it will display "Blank column in the improvement plan"if all the improvement plans are not filled in.
Please confirm all the improvement plans are filled in and check that A, B, C, and D are displayed in "Rank" column.

Procedure-(6):

If there is either "Partial conformance" or "nonconforming", a corrective action plan should be entered in the column of "Improvement Plan", and then select a result of the plan from the pull down menu for the column for "Judgment after Plan" in the same way as the procedure-(1). The space for the score after the plan will have the result automatically in the same way as the procedure-(3).
In case of manual processing, enter the score following the scoring system described in the procedure-(3).

End of explanation

Date　　/

Supplier's Name　:
(Your company's name)

Supplier's code　:

Company's Name *2:
(Manufacturer)

Division's name *3:

Self-evaluation sheet for supplier of environmental management (Ver.4.1)

Alps Electric requests its suppliers to take actions according to the action item list described in the guideline which an article management promotion conference (JAMP) publishes.

Please refer to "Guidelines for Management of Chemical Substances in Products" and implement selfchecking about your green procurement status by filling in the self-evaluation check sheet in the appendix.
When you fill in the self-evaluation sheet, refer to the entry method in the another page of the "Explanation and procedure".

* Indicate all the standards that you are certified to by changing ☐ to.

☐ ISO14001	Date of Original Approval : / / [D/M/Y]	Date of Last Revision : / / [D/M/Y]	Certification body:	Registration NO:
☐ ISO9001	Date of Original Approval : / / [D/M/Y]	Date of Last Revision : / / [D/M/Y]	Certification body:	Registration NO:
☐ IATF16949	Date of Original Approval : / / [D/M/Y]	Date of Last Revision : / / [D/M/Y]	Certification body:	Registration NO:

☐ The certifications mentioned above have not been acquired.

* Please fill in the date on which the supplier completed the self-evaluation sheet.

(Completion date:　/　/　[D/M/Y])

*1: This check sheet is prepared by Alps Electric for your submission in accordance with the action item list in a tool prepared by the article management promotion conference (JAMP) publishes.
*2: Enter the name of the company subject to this self-evaluation.
(If you are a manufacturer, enter your name.) (If you are a trading company, enter the manufacturer's name who actually manufactures the products to be delivered to)
*3: Enter the name of the factory subject to this self-evaluation.

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

No	Action Details							by Self-Evaluating Organization			by Evaluation-Result Verifying Organization		Score	Improvement program	Evaluation after improvement program	Score after improvement program
	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	Self-Evaluation Result	Score	Answer (Implementation details, Evidence name, etc.)	Judging Result	Judgment reason, memo, remarks, etc.				
4.1 Management of Chemical Substances in Products in General : This check sheet is in compliance with JIS Z 7201:2012 "Management of Chemical Substances in Products - Principles and Guidelines", however "4.1" is only a title without any specific action details. Therefore, no questions are given under 4.1																
4.2 Representation of the Management Policy of Chemical Substances in Products																
	Top managers in charge of management of chemical substances in products shall determine the management policy of chemical substances in products for the organization and address appropriate implementation of management of chemical substances in products															
1	Common Management	Verification of Implementation	●			(1) Has the top management determined the management policy of chemical substances in products and addressed implementation of the effectual management of chemical substances in products?	<sample answer> - xxx Co. Ltd., the environment policy - xxx Inc., the quality policy - xxx Corporation management policy, management slogan <note & point of management> - The policy shall include contents suggesting management of chemical substances in products, such as compliance with laws and regulations, satisfying customers' requirement, etc. etc. - Tops managers are those who regulate management of chemical substances in products			(1) Enter the name of policy document which defines the management policy of chemical substances in products						
2	Common Management	Review		●		(2) Do you review the policy whenever it is required?	＜sample answer＞ - Date of review or revision : dd/mm/yyyy ＜note & points of management＞ - "Whenever it is required" means upon amendment of law or regulations, management review, a customer request, etc. the organization conducts review of such amendment., - After the policy is reviewed for the purpose of management of chemical substances in products and if the policy is not necessary to revise, it is acceptable if the organization verifies to maintain the existing policy. For example, the responsible person of environmental management issues a comment "it is not necessary to revise the policy" in the management review , etc.			(2) Enter when was the latest review of the policy						
3	Common Management	Documentation		●		(3) Do you have any document which defines the procedure to implement (1),(2) shown above?	<sample answer> - "Regulations of Management of Chemical Substances in Products" Document No. xxxx Revision 01 Article No. xx : Determine the management policy Article No. xx : Dissemination of the management policy Article No. xx : Review of the management policy			(3) Enter the name of document specifying about formulating the policy, and its document no., an article name, revision no.						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

No	Action Details							by Self-Evaluating Organization			by Evaluation-Result Verifying Organization		Score	Improvement program	Evaluation after improvement program	Score after improvement program
	Main Classification	Sub-Classification	Question Flag: Step 1	Step 2	* marked by evaluator	Questions	Sample Answer / Note & Point of Management	Self-Evaluation Result	Score	Answer (Implementation details, Evidence name, etc.)	Judging Result	Judgment reason, memo, remarks, etc.				
4	Common Management	Dissemination	●			(4) Do you inform and disseminate the policy to all the concerned departments?	* Questions based on "4.3.4 Internal Communication" stated in JIS Z 7201 Management of Chemical Substances - Principles and Guidelines <sample answer> - Posters posted in the company - Published by Intranet			(4) Enter the dissemination method of the policy						

4.3 Planning : **This Check Sheet is compliant to JIS Z 7201:2012 the Management of Chemical Substances in Products - Principles and Guidelines". "4.3 Planning" is only a title without any specific action details and therefore no question is given under 4.3**

4.3.1 Defining the Management Criteria of Chemical Substances in Products

The organization shall determine and document the management criteria of chemical substances in products.

5	Common Management	Verification of Criteria and Implementation	●			(1) Do you have clear management criteria of chemical substances in products which defines chemical substances subject to management of chemical substances in products and the management level?	<sample answer> - "Regulations of management of chemical substances in products (Document No. xxxx Revision 01)" Article No. xx : "List of prohibited substances / management of inclusion in products" <note & point of management> - In case that the organization declares no possibility of inclusion in products based on the scientific grounds, it doesn't have to reflect the management criteria, however the evidence or the facts need to be provided - The management level means the level of "prohibited to use" or "management of contained chemicals", etc.			(1) Enter the name of the management criteria which specifies chemical substances subject to management of chemical substances in products and the management level.						
6	Common Management	Verification of Implementation		●		(2) Do you have a clear scope where the management system of chemical substances in products is applied?	<sample answer> Products designed or developed by xxx Co. Ltd. and their packing materials <note & points of management> - If all products are subject to management of chemical substances in products, describe as it is (targeting all products). The scope of application can be clearly defined by dividing a scope by an organization, a product or a manufacturing process, etc. It is also acceptable if the scope of non-application (scope where management of chemical substances in products is NOT applied) is specified			(2) List up the scope of application						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

Action Details

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
7	Common Management	Verification of Implementation	●			(3) Do you identify laws and criteria which you refer to when you develop the management criteria of chemical substances in products?	<sample answer> - It is defined based on laws, regulations and the industry criteria - it is specified based on the customer requirements - It is defined based on JAMP declarable substance list - It is corresponding based on JIG-101, JIG-201			(3) List up the criteria which you referred to (or reflect) when the management criteria were developed						
8	Common Management	Review	●			(4) Do you review the management criteria whenever it is required?	<sample answer> Date of revision : ****** Reason for revision : ******			(4) Enter when was the latest revision and also state its reason						
9	Common Management	Documentation		●		(5) Do you have any document which defines the procedure to implement (1)-(4) shown above?	<sample answer> - "Regulations of management of chemical substances in products" Document No. xxxx Revision 01			(5) Enter the name of the document which specifies drawing up the management criteria of chemical substances in products and defines the revision procedures. Also state its document no. an article name, revision no.						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

No	Action Details							by Self-Evaluating Organization			by Evaluation-Result Verifying Organization		Score	Improvement program	Evaluation after improvement program	Score after improvement program
	Main Classification	Sub-Classification	Question Flag: Step 1	Step 2	* marked by evaluator	Questions	Sample Answer / Note & Point of Management	Self-Evaluation Result	Score	Answer (Implementation details, Evidence name, etc.)	Judging Result	Judgment reason, memo, remarks, etc.				
10	Common Management	Dissemination	●			(6) Do you inform and disseminate the management criteria of chemical substances in products to all the concerned departments?	* Questions are based on "4.3.4 Internal Communication" stated in JIS Z 7201 "Management of Chemical Substances in Products - Principles and Guidelines)" <sample answer> - The latest version is publicized by intranet to disseminate to all the concerned department at the time of revision			(6) Enter the dissemination method of the management criteria of chemical substances in products.						

4.3.2 Target and Implementation Plan

- The organization shall set The target for management of chemical substances in products. The organization shall draw up, implement and sustain The implementation plan to achieve The target. The organization shall review The target and The implementation plan whenever needed.

11	Common Management	Verification of Implementation	●			(1) Do you set the target for management of chemical substances in products?	<sample answer> - 2012 Environmental Target "Zero nonconformance of chemical substances in products" <note & point of management> - In case that the system to manage chemical substances in products has already been established, it is acceptable if the organization has already set the target (or the policy) to continue and sustain the management system.			(1) Enter the name of the document which set the target to manage chemical substances in products						
12	Common Management	Verification of Implementation	●			(2) Do you formulate the implementation plan to achieve the target? Do you implement and sustain it?	<sample answer> - Chemical substance inspection plan - Supplier evaluation plan			(2) Enter the name of the document in which the plan is recorded and the name of the record where the implementation status is recorded						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

Action Details

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
13	Common Management	Review	●			(3) Do you review the target or the implementation plan whenever it is required?	<sample answer> Revision of target: 20 retention period : dd/mm/yy Revision of implementation plan: 20 retention period : dd/mm/yy			(3) Enter when was the latest revision of the target and the implementation plan						
14	Common Management	Documentation		●		(4) Do you have any document which defines the procedure to implement (1)-(3) shown above?	<sample answer> - "Regulations of management of chemical substances in products (Document No. xxxx Revision 01)" Article No. xx : Objective / target			(4) Enter the name of the document which defines to set the target and to draw up the implementation plan. Also state its document no, an article name, revision no.						
15	Common Management	Dissemination	●			(5) Do you disseminate the target and the implementation plan to all the concerned departments concerned?	* Questions based on "4.3.4 Internal Communication" stated in JIS Z 7201 Management of Chemical Substances in Products - Principle and Guidelines <sample answer> - Published by intranet			(5) Explain the method to disseminate the target or the implementation plan						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

Action Details

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
4.3.3 Defining Responsibility and Authority																
The organization shall determine responsibilities and authorities to implement management of chemical substances in products effectively.																
16	Common Management	Verification of Implementation	●			(1) Have you defined roles and departments to be engaged in management of chemical substances in products?	<sample answer> - Quality management organization chart, Environmental management organization chart, organization chart of management of chemical substance in products, etc. <note & point of management> - The roles of management of chemical substances in products can be defined in the system of quality management or environmental management. - it is advisable that "role/responsibility/authority" is specified in the organization chart - "Clearly defined responsibilities and authority" is synonymous with “departments and roles have been clearly determined			(1) Enter the name of the document which defines the role and the relevant department to be engaged in management of chemical substances in products						
17	Common Management	Documentation		●		(2) Do you have any document which defines the procedure to implement (1) as shown above?	＜sample answer＞ - "Regulations of management of chemical substances in products (Document No. xxxx Revision 01)" Article No. xx : Responsibility, Authority and Role			(2) Enter the name of the document which defines the role and the departments to be involved in management of chemical substances in products. Also state its document no, an article name and revision no.						
18	Common Management	Dissemination	●			(3) Do you disseminate to all departments concerned about the roles and the departments of management of chemical substances in products?	* Questions based on "4.3.4 Internal Communication" stated in JIS Z 7201 Management of Chemical Substances in Products - Principles and Guidelines <sample answer> - "Regulations of management of chemical substances in products" are published by intranet to disseminate to all departments concerned at the time of revision			(3) Explain the method of dissemination about roles and departments						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

No	Action Details							by Self-Evaluating Organization			by Evaluation-Result Verifying Organization		Score	Improvement program	Evaluation after improvement program	Score after improvement program
	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	Self-Evaluation Result	Score	Answer (Implementation details, Evidence name, etc.)	Judging Result	Judgment reason, memo, remarks, etc.				

4.4 Operation and Management & 4.4.1 Operation and Management in General:

(Note) "4.4.2 Management of chemical substances in products at design and development" is applicable not only limited to the design department. If the organization selects own parts and components, the organization obtains "design function" and therefore this action item becomes applicable

The check sheet is compliant to "JIS Z 7201:2012 Management of Chemical Substances in Products - Principles and Guidelines", however "4.4 Operation and Management" and "4.4.1 Operation and Management in General" do not have any specific action details. Therefore, no question is given under 4.4 and 4.4.1.

4.4.2 Management of Chemical Substances in Products at Design and Development

For the purpose of producing products which can fulfill the management criteria of chemical substances in products in the stage of design and development, the organization shall define clearly and document the management criteria of chemical substances in products at the respective stage of purchasing, manufacturing and delivery corresponding to products and the nature of business.

No	Main Classification	Sub-Classification	Step 1	Step 2	* marked by evaluator	Questions	Sample Answer / Note & Point of Management	Self-Evaluation Result	Score	Answer (Implementation details, Evidence name, etc.)	Judging Result	Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
19	Process Control	Verification of Implementation	●			(1)For the purpose of satisfying the management criteria of chemical substances in products, do you verify during design and development (before start of production) whether or not the applicable products fulfill the management criteria of chemical substances in products at the respective stage as shown below ? (Purchasing the management criteria of chemical substances in products at purchasing (Manufacturing the management criteria of chemical substances in products for the manufacturing process (Delivery the management criteria of chemical substances in products at delivery	<sample answer> (Purchasing stage) (1) Purchased products have been inspected and do not contain prohibited substances for use (2) Evaluation result of the supplier who supplies the products is acceptable (Manufacturing stage) -The manufacturing process satisfies the process control criteria including the management criteria of chemical substances in products (Delivery stage) -To satisfy delivery conditions, the above verification items at the purchasing stage and the manufacturing stages have to be fulfilled <note & point of management> - It is acceptable if contents of the management criteria at purchasing, the management criteria at manufacturing and the management criteria at delivery match the nature of the business operation * Questions concerning the management criteria of the respective stage appear in each action item as shown below - The organization shall verify by the specification of mass production products - The organization shall Identify whether or not there is a process which may generate concentration change of contained chemical substances. If the process causes a change, such a change needs to be considered			(1) Explain details of verification to evaluate during design and development if applicable products satisfy the management criteria of chemical substances in products at the respective stage (as shown in left cell)						
20	Process Control	Verification of Implementation		●		(2)Do you record the result of verification as shown in (1)?	<sample answer> The following are evaluation items for product assessment report 1. the purchasing management criteria evaluation result 2. the manufacturing management criteria evaluation result 3. the delivery criteria evaluation result			(2) Enter the name of record containing verification result of above (1)						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

No	Action Details: Main Classification	Sub-Classification	Question Flag: Step 1	Step 2	* marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	Score	Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
21	Process Control	Documentation	●			(3) Do you have any document which defines the procedure to implement (1) (2) shown above?	<sample answer> - "Regulations of Product Assessment" Article No. xx : Product Evaluation <note & point of management> - "The stage of design and development" means not only works done in the design and development department, but also including works done by the relevant departments up to start of production			(3) Enter the name of the document which defines the procedure to implement the above (1) (2). Also state its document no, an article name, revision no.						

4.4.3 Management of Chemical Substances in Products at Purchasing : **The check sheet is compliant to "JIS Z 7201:2012 Management of Chemical Substances in Products - Principles and Guidelines", however, "4.4.3 Management of Chemical Substances in Products at Purchasing" is only a title without specific action details. Therefore, no question is given under this action item.**

4.4.3.1 Collection and Verification of Information of Chemical Substances in Products

The organization shall present the management criteria of chemical substances in products for purchasing (hereinafter referred to as "the purchase management criteria") to suppliers, and collect necessary information of chemical substances in products. The organization shall verify if information of chemical substances in the purchased products satisfies the purchase management criteria and record the result accordingly.

22	Process Control	Verification of Criteria	●			(1) Do you have the purchase management criteria which include chemical substances specified by the management criteria of chemical substances in products and the management level?	<sample answer> - Green Procurement Criteria (List of declarable substances) - Green Procurement Chemical Substance Questionnaire <note & point of management> - Packing materials, secondary materials and sub-materials shall also be subject to the purchase management criteria			(1) Enter the name of the management criteria for purchasing						
23	Process Control	Dissemination	●			(2) Do you disseminate "the purchase management criteria "for the above purchased products to the suppliers?	<sample answer> The method of dissemination: - The company made a list of suppliers (purchased products) and sent "Green Procurement Criteria" to all the listed suppliers. The company collected "acknowledgement of receipt" from them. - The company specifies in the business agreement, the final specification of parts or in the drawing, that "compliance to Green Procurement Criteria" may be required by the company whenever necessary. Time of dissemination : [at the start of fresh purchase and when the criteria is revised]			(2) Explain the dissemination method of "the purchase management criteria" to suppliers and when to disseminate it Dissemination method : [Dissemination time : [						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

Action Details

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
24	Process Control	Verification of Implementation	●			(3) Do you verify for all constituent elements constructing the end product whether or not information of chemical substances in products is needed, and collect all necessary information of chemical substances in products ?	<sample answer> - By linking the survey results to BOM (bill of material) of the product, the company verifies if all parts and materials are surveyed. Sub materials which cannot link to BOM (bill of material) are managed by using another list <note & point of management> - Secondary materials, sub-materials or packing materials should also be included as constituent elements if necessary. - When there is some element out of product's constituent elements that should be exempted from the survey, provide the reason for exemption Example: Parts or materials that are specified by the customer have been agreed on with the customer to exclude them from survey The company has defined the person in charge, the procedure and the method to collect information of chemical substances contained in purchased products (raw materials / parts and components)			(3) Explain the method how to verify if information of chemical substances in products is obtained for all constituent elements constructing the end product * If this action item is considered not required for management of chemical substances in products, state its reason						
25	Process Control	Verification of Implementation		●		(4) Does information of chemical substances in products collected in the above (3) indicate clearly about any or no inclusion, content, concentration or its usage, etc.?	<sample answer> - Parts : JGP file, JAMP AIS, JAMA/JAPIA Sheet etc. - Material: JAMP MSDSplus, composition table, certificate of non-use, etc. <note & point of management> - The company shall ensure that all information is provided - If the company has its own format, the company shall ensure that the format includes any or no inclusion, content, concentration, its usage as the survey items			(4) Enter the names of the survey format for each material or for each part * In case there are a variety of formats for each type of purchased materials and parts, list the format for each type of purchased parts and materials						
26	Process Control	Verification of Implementation	●			(5)About collected information of chemical substances in products as shown in above (3), do you judge the conformance status to the management criteria for each purchased product?	＜sample answer＞ - The company evaluates either "OK" or "NG" for every survey result collected individually and record it accordingly			(5) Explain the method of judging the conformance status to the management criteria for each purchased products. Also provide the recording method						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

Action Details

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
27	Process Control	Verification of Implementation	●			(6) When necessary information shown in above (3) could not be collected, or if it does not satisfy the purchase management criteria, have you defined the action to respond to this case?	<sample answer> The company has already verified the survey in document that showed no inclusion of prohibited substances during the stage of design and development. Hence, the company shall collect "information of chemical substances in products" until the delivery verification. <note & point of management> - If it does not conform to the management criteria, the company shall take a necessary response such as "no purchasing"			(6) Explain how to respond to the case if the company fails to collect information, or the purchase management criteria is not satisfied						
28	Process Control	Verification of Implementation		●		(7) Is the information of chemical substances in products aggregated for each end-product?	<sample answer> - "Chemical Substance Management System" Aggregation result of information of chemical substances in products <note & point of management> - Aggregation by each end product means to aggregate against the management criteria of chemical substances regulated in "the purchase management criteria"			(7) Enter the name of the record which is the aggregated information of chemical substances in products for end products						
29	Process Control	Verification of Implementation	●			(8) Do you judge the conformance status to the management criteria of chemical substances in products for each end product before start of manufacturing?	<sample answer> - "Chemical Substance Management System" judgment result of product <note & point of management> - Judgment of the conformance status means to judge the conformance status against the criteria defined in "the purchase management criteria" such as prohibited to use, etc.			(8) Enter the name of the record which shows verification of the conformance status to the management criteria of chemical substances for end products						
30	Process Control	Documentation		●		(9) Do you have any document which defines the procedure to implement as shown (1)-(8) above?				(9) Enter the name of the document which defines the procedure of verification and collection of information of chemical substances in products. Also specify its document no, an article name, revision no.						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

Action Details

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
4.4.3.2 Verification of the Management Status of Chemical Substances in Products at Supplier																
#NAME?																
31	Process Control	Verification of Implementation	●			(1) Do you request the suppliers to establish and operate the management system of chemical substances in products for the purpose of fulfilling the management criteria of chemical substances in products?	<sample answer> - The company requests the suppliers in "the Green Procurement Criteria" to establish and to operate the management system based on "Guidelines for the management of chemical substances in products" <note & point of management> - The management system of chemical substances in products which can satisfy the management criteria of chemical substances in products means the system which can manage contained chemical substances in products appropriately at the respective stage of purchasing, manufacturing and delivery Example: Main requirements stated in "Guidelines for the management for chemical substances in products (Ver. 3.0) are shown below A. Defining the management criteria B. Collection and verification of information of chemical substances in products C. Verification of the management status at the supplier D. Verification at receiving E. Prevention of contamination by incorrect use or admixture F. Appropriate management of reaction process G Traceability H. Change management I. Response to occurrence of nonconformance - if there is any exemption from the management, state its reason and specify the action - In case of multi-sourcing (purchasing from several suppliers), all suppliers are subject to management of chemical substances in products			(1) List the name of the standard / the criteria for management of chemical subspaces in products which you request to the supplier						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

Action Details

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
32	Process Control	Verification of Implementation	●			(2) Do you verify the management status of chemical substances in products at the supplier when you appoint a new supplier?	<sample answer (verification details, items)> a. the check sheet of Guidelines for the management of chemical substances in products (version 3.0) b. other check sheets c. certification of ISO9001/ISO14001 * In case of verifying certification of ISO9001/ISO14001, it is necessary to verify if "management of chemical substances in products" is also included e. verification of the system for no inclusion of prohibited chemical substances <sample answer (verification method)> a. details including the above tools are verified by using email or checking the document b. when required, details including the above tools are verified at the supplies' place c. the company verifies the management status published in a website or from other open source <note & point of management> - Verification details correspond to requirements (refer to note & point of management in ①) to the suppliers			(2) Explain verification details and the method of verification when the company appoints a new supplier. Verification details (items) : [Verification method : [						
33	Process Control	Verification of Implementation	●			(3) When you continue business with the supplier, do you re-verify the management status of chemical substances in products periodically when required?	<sample answer (verification target)> a. the company verifies all the suppliers b. only the suppliers whom the company decides as necessary are subject to verification <sample answer (verification details, items)> a. the check sheet of Guidelines for the management of chemical substances in products (Ver. 3.0) b. other check sheets c. certification of ISO9001/ISO14001 * in case of verifying certification of ISO9001/ISO14001, it is necessary to verify if "management of chemical substances in products" is also included e. verification of the system for no inclusion of prohibited chemical substances <sample answer (verification method)> a. details including the above tools are verified by using email or checking the document b. when required, details including the above tools are verified at the supplies' place c. the company verifies the management status published in a website or from other open source <sample answer (frequency)> frequency: more than once every 2 years <note & point of management> - Verification details correspond to requirements (refer to note & point of management in ①) to the suppliers			(3) Explain the method of re-verification from the following points Target : [Verification details (items) : [method : [frequency : [						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

Action Details

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
34	Process Control	Record	●			(4) Do you record verification result of the management status of chemical substances in products at the suppliers for (2) (3) shown above?	<sample answer> - Judgment record - List of evaluation result of the suppliers			(4) List the name of the record which shows the evaluation of the suppliers						
35	Process Control	Verification of Implementation	●			(5) Have you defined any response or any action to take for (2) (3) shown above, when verification for the management status of chemical substances in products is incomplete or when verification contents or verification result show some problem?	<sample answer (method of action)> a. Actions include "improvement request" b. Actions include "guidance (instruction)", and the company actually gives guidance to the supplier c. While the company gives the improvement guidance to the supplier, the company continues verification whether or not any problem still remains by analyzing every lot until the completion of improvement activity d. Actions include "cease business"			(5) Explain the method of action or response when verification for the management status is incomplete, or when the problem is found in verification contents or verification result						
36	Process Control	Verification of Implementation		●		(6) Do you request and verify the following to the suppliers (the first tier supplier)? ・to develop and operate the management system of chemical substances in products for the suppliers (the second tier supplier) of their purchased products	<sample answer> The company verifies the supplier's status as stated below - The company inspects the evaluation record (such as a check sheet, etc.) conducted by the supplier (the first tier supplier) and verifies if the evaluation of the second tier supplier is properly conducted. <note & point of management> - Verification contents are the same as requirements for the supplier (refer to the above (1) "note & point of management")			(6) Explain your verification method (how you verify)						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

Action Details

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
37	Process Control	Verification of Implementation		●		(7) In your evaluation to determine a new supplier or to re-appoint the existing supplier, do you verify the following? ・if the supplier inspects and identifies if there is any process or any material which may cause a contamination of prohibited substances as defined in the management criteria of chemical substances in products	<sample answer> -1 The company verifies the followings: 1) If there is any process of parallel production which may cause a contamination of RoHS substances 2) If the supplier uses any recycled material (open / closed) which may be contaminated with RoHS substance 3) if there is any solder bath which may be contaminated with RoHS substances			(7) Explain verification contents to identify if there is any process or any material which may cause a contamination of prohibited substances which is defined by the supplier for the management criteria of chemical substances in products						
38	Process Control	Verification of Implementation		●		(8) In the verification result shown in (7), if there is a possibility of contamination of prohibited substances specified in the management criteria of chemical substances in products at the supplier, do you verify if the supplier implements proper management to prevent contamination of prohibited substances?	<sample answer> - Example of the management method when there is a parallel production which may cause contamination of RoHS substances 1) Segregating the storage shelves for products containing prohibited substances or segregating product packaging (labeling., etc.) 2) Isolating components and parts containing prohibited substances 3) Parts and components containing prohibited substances are managed only by the authorized person 4) The company has verified that equipment, tools, jigs and containers that are used for components and parts containing prohibited substances, but difficult to clean, are not used to produce components and parts which do not contain prohibited substances 5) For the purpose of preventing contamination, the company has defined the cleaning standards for cleanable equipment, tools, jigs and containers which are used for components containing prohibited substances - Example of the management method for using recycled materials 1）Conducting analysis for every lot at receiving - Example of the management method for using a solder bath 2）Periodical analysis of solder bath			（8） List an example of the appropriate management method (proper method from the company's viewpoint) for preventing contamination of incorrect use or admixture						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

Action Details

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
39	Process Control	Verification of Implementation		●		(9) As a result of (8) shown above, when management cannot be verified at the supplier, do you verify and manage by yourself whether or not "purchased products fulfill the purchase management criteria" based on a proper evidence?	<sample answer> - When management is not performed sufficiently at the supplier despite of possible contamination of RoHS substances due to parallel production, recycled materials (open/closed) or concentration change in solder bath, the company conducts analysis using chemical analysis devise (XRF, ICP, etc.) <note & point of management> Proper evidence is shown in the next examples - The company collects and verifies the analysis data of initial delivery from the supplier and carries out periodical incoming analysis for every lot of products - Periodical analysis of the end product at the customer - f a purchased product is a material, the company collects the certificate of material issued by the material manufacturer			(9) Explain the evidence-based method of verification and management you (organization) conduct by yourself when management is not practiced sufficiently						
40	Process Control	Documentation		●		(10) Do you have any document which defines the procedure to implement (1)-(9) shown above?	<sample answer> - "Regulations of supplier management (Document No. xxxx Revision 01)" Article No. xx : Requirements, Article No. xx: Updating evaluation, Article No. xx: Actions when evaluation is not conducted			(10) Explain the name of the document which defines the procedure to evaluate the supplier. Also state its document no, an article no, and revision no.						

4.4.3.3 Management of Chemical Substances in Products at Receiving

The organization shall verify purchased products upon receiving if they fulfill the purchase management criteria of the organization and record it accordingly

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
41	Process Control	Verification of Implementation	●			(1) Do you verify whether or not the purchased products fulfill the purchase management criteria at receiving?	<sample answer> - The company verifies that the purchased products satisfy the purchase management criteria prior to issuing a purchase order. Therefore, the company inspects model names and model numbers against ordered items. <note & point of management> - Receiving verification also includes products produced by the outsourcing organization - The company may select verification targets, criteria, method and frequency depending on the risk level - If the company has the ordering system which allows to issue an order only for parts/materials that are compliant to the management criteria, the company may inspect only order numbers or model names at receiving			(1) Explain the specific method of verification						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

Action Details

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
42	Process Control	Verification of Implementation		●		(2) Do you conduct verification by evidence such as analysis when it is required?	<sample answer> Management target: Resin recycled materials Method of verification: the company conducts verification based on the analysis data received from the supplier or in-house XRF analysis result <note & point of management> - If there is a risk in secondary materials (indirect materials) such as solder, grease, adhesives, oil, tape, cushion material, bonding material, ink (including marker pen, stamp) that are used for (or applied to) products, they should also be subject to verification - It is advisable to incorporate the following contents into the procedure that verifies the analysis data of purchased parts and components a) If a content (volume) of prohibited substances is measured in the company to make a judgment ⇒ See below (1)-(3) b) If a judgment is made based on the data collected from the supplier or from the outsourcing organization⇒ See (1)-(3) below c) If a judgment is made based on the result of the analysis conducted by the external organization ⇒ See (2) below (1) items subject to analysis, chemical substances, number of samples, frequency of measurement, judging criteria * the method of measurement is also considered for the judging method of hexavalent chromium or specific bromine that can not be measured by XRF analysis (2) Reporting channel or roles in case of abnormal value shown in the measurement result (3) Periodic inspection or calibration for testing equipment			(2) Enter the targets that are required to verify by the evidence such as analysis. Also state its method of verification Management target: [Method of verification: [						
43	Process Control	Record	●			(3) Do you record the result of above (1)?	<sample answer> - Incoming inspection performance record, Measurement record			(3) Enter the name of the records where receiving verification is recorded						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

Action Details

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
44	Process Control	Documentation		●		(4) Do you have any document which defines the procedure to implement (1)-(3) shown above?	<sample answer> - "Receiving inspection criteria (Document No. xxxx Revision 01) Article No. xx : Receiving inspection			(4) Enter the name of the document which specifies the method of verification at receiving, and also state its document no, an article (item) name, a revision no.						

4.4.4 Management of Chemical Substances in Products for the Manufacturing Process:

4.4.4.1 Management of Chemical Substances in Products for the Manufacturing Process in General

This check sheet is compliant to "JIS Z 7201:2012 Management of Chemical Substances in Products - Principles and Guidelines", however 4.4.4 Management of Chemical Substances in Products for the Manufacturing Process is only a title without specific action details. Therefore, no question is given under this action item.

The organization shall manage the manufacturing processes in accordance with the management criteria of chemical substances in products for manufacturing processes and record the result accordingly.

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
45	Process Control	Verification of Implementation	—	—		(1) Is there any possibility to generate any restricted substances or to have residue of restricted substances exceeding the management criteria of chemical substances in products, when there is a conversion process of composition change or concentration change in the manufacturing process using chemical substances/mixture, but no appropriate management is conducted? * If the above condition does not apply, enter "non-applicable" into (2)-(4)	<sample answer> - applicable process : electroless nickel plating - used material：plating solution（Ni90-92%、P8-10%、below Pb 1000ppm） - declarable substances : lead - type of reaction: a very small amount of lead compound (which is added to stabilize a bath) goes into a film during reaction <note & point of management> Declarable substances specified by the management criteria of chemical substances in products may possibly be generated or remained exceeding the management criteria Example of concentration change, reaction process - Polymerization (PVC: chemical reaction of vinyl chloride) - Electroless nickel-plating process (lead: concentration change in plating solution) - Ink. paint (lead, cadmium, etc. :change in concentration due to volatilization of solvent, etc.) - Sealant agent (DBT, DOT: hardening reaction of two-component mixed type sealant)			(1) If the condition in Question (1) is applicable, enter the applicable process, used materials and reaction details applicable Process：[used material：[declarable substances：[reaction details：[						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

Action Details

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
46	Process Control	Verification of Criteria and Implementation	●			(2) For the process applicable to (1) above, do you define the management criteria of chemical substances in products for the manufacturing process and manage the process accordingly?	<sample answer> - the document that defines the management criteria for the stage of manufacturing ：[Operation Manual of Plating Process] - Specific method of management ：[in order to regulate lead added into plating solution as a stabilizer, the company set the criteria value of lead (Pb) at "xxx ppm" and analysis is carried out monthly for verification purpose] <note & point of management> - In case of manufacturing chemical substances/mixture, do you define the purchasing conditions, the manufacturing process, the manufacturing condition, the inspection and delivery conditions in order to satisfy the management criteria for products, while focusing on chemical substances/mixture contained in raw materials or secondary materials and chemical substances added, generated and removed in the process? - In case of manufacturing articles using chemical substances/mixture, do you design products or a process while focusing on a change in concentration of chemical substances or a change in the type of chemical substances contained in articles during the process based on logical reasons? * it applies when solder, adhesive, grease or ink, etc. is used in the process - It is acceptable if "the management criteria of chemical substance in products in the stage of manufacturing" is reflected in QC process chart, management process diagram, management flow diagram, or operation procedures, etc.			(2) List the document specifying the management criteria in the manufacturing stage for the applicable ・the document defining the management criteria in the manufacturing process： [・specific method of management： [						
47	Process Control	Record	●			(3) Do you record the management result shown in (2) above?	<sample answer> - Test piece analysis report (for plating process)			(3) Enter the name of the record which contains the management result						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

Action Details

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
48	Process Control	Documentation		●		(4) Do you have any document which defines the procedure to implement (2)-(3) shown above?	<sample answer> - "Rules of process management (Document No. xxxx Revision 01)", Article No. XX : Management of reaction process "Operation Procedure"			(4) Enter the name of the document which specifies the process management. Also state its document no.						

4.4.4.2 Prevention of Contamination by Incorrect Use or Admixture

The organization shall implement the preventive measures against contamination by incorrect use or admixture of chemical substances which are applicable under the management criteria of chemical substances in products

49	Process Control	Verification of Implementation	●			(1) Do you implement the preventive measures against contamination by incorrect use or admixture of chemical substances which are subject to the management criteria of chemical substances in products? *Actions for "prohibited material" specified in the management criteria of chemical substances in products are verified in (2)-(7)	<sample answer> - Management is practiced in accordance with QC process chart <note & point of management> - It is acceptable if details of preventive measures against contamination by incorrect use or admixture are specified according to the management level of chemical substances that may cause contamination (prohibited substance or management of contained substances) - If there is no possibility of contamination by incorrect use or admixture of "prohibited substances as defined by the management criteria of chemical substances in products, it is acceptable if the company conducts general process control to prevent contamination by incorrect use or admixture - If there is a process or a material which may cause contamination by incorrect use or admixture of "prohibited substances" as specified in the management criteria of chemical substances in products, the company needs to undertake actions of (3)-(7) below			(1) Explain the specific method of management * If there is a process which may cause contamination by incorrect use or admixture of "prohibited substances" as defined by the management criteria of chemical substances in products, specify the management method in（3）～（7）						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

Action Details

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
50	Process Control	Verification of Implementation	—	—		<Actions for prohibited substances> (2) Is there any process which may cause contamination by incorrect use or admixture of "prohibited substances" as specified in the management criteria of chemical substances in products or is there any process or material which is not yet verified? * If there is no possibility of contamination by incorrect use or admixture as well as there is no process or no material which has not been verified, enter "non-applicable" in (3)-(7)	<sample answer> - Parts or material： electrical cable - Prohibited substances： lead - Process： surface mount process - Use: to be used for automobile parts <note & point of management> - The company needs to include not only the processes for the targeted customer, but also other processes when judging whether or not "prohibited substance "may possibly cause contamination by incorrect use or admixture - The followings are examples of suspected contamination by incorrect use or admixture of "prohibited substances" as specified in the management criteria of chemical substances in products a. There is a parallel production using "prohibited substances" in the production line allocated for the customer of no-restriction, b. Recycled material (open / closed) is used			(2) If there are parts or materials containing prohibited materials, list the name of parts and materials containing prohibited substances. Also state prohibited substances, a process and its use						
51	Process Control	Verification of Implementation	●			<Actions for prohibited substances> (3) Do you conduct proper management to prevent contamination by incorrect use, admixture or mix-up at receiving of parts and materials or at the storage area (including secondary materials and packing materials)?	<sample answer (the management method)> - to put a label "nonconformance" onto nonconformance parts (electrical cable containing lead) at receiving - to put a divider to segregate nonconformance parts and materials that contain prohibited substances in the storage area - At receiving, the company analyzes open recycled materials for each lot by XRF analysis equipment and verifies if prohibited substances do not exceed a threshold value due to inconsistency of concentration <notes & point of management> - For conducting the effectual management method to prevent contamination by incorrect use or admixture, the management method has to be in such a manner that anyone working in management doesn't make any mistake (ex. labeling, specialization, limiting the person in charge, etc.)			(3) Explain the specific method of management to prevent contamination by incorrect use, admixture or mix-up at "the parts and material storage area (including secondary material and packing material)"						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

Action Details

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
52	Process Control	Verification of Implementation	●			<Actions for prohibited substances> (4) Do you conduct proper management to prevent contamination by incorrect use, admixture or mix-up at the manufacturing processes shown below? a. Line process (including peripherals) b. work-in-progress storage (including the long-term WIP storage area) c. Rework process (ex. a repair process for soldering and not a normal production line) d. production equipment, tools and jigs (if they touch or attach to parts or materials)	<sample answer (the management method)> (4) - 1: Line process（including peripherals） - The company designates the special line (line designated for the customer of no-restrictions) using "prohibited substance" and put up a sign for identification - Solder irons or cleaning sponges for special use are separated and an identification sticker is pasted on them (4) - 2:WIP storage area (including long-term WIP storage area) - The company allocates a special area to store WIP which is not subject to restrictions of "prohibited substances" and put up a sign for identification - The company keeps a long term WIP in a locked area and specifies a person in charge to handle (4) - 3: Rework process - The company designates a special repair line used for non-restriction items of "prohibited substance" (4) - 4:Production equipment, tools and jib (when they touch or attached to parts or materials） - The company segregates specialized production equipment, tools and jib used for no-restrictions of "prohibited substances" and puts a label for identification (sticker) - The company defines the cleaning standards for production equipment, tools and jigs which are used for no-restrictions of "prohibited sustenance" and conducts the management accordingly <note & point of management> - For implementing the effectual management method to prevent contamination by incorrect use or admixture, the management method has to be in such a manner that anyone working in management doesn't make any mistake (ex. labeling, specialization, limiting the person in charge, etc.)			(4） List the specific management method to prevent contamination by incorrect use, admixture, mix-up for the following manufacturing processes (4) - 1： Line process (including peripherals) (4) - 2 : WIP storage area (including long-term WIP storage area) (4) - 3 : Rework process (4) - 4 : Production equipment, tools and jigs (if they attach or touch to parts or materials)						
53	Process Control	Verification of Implementation	●			<Actions for prohibited substances> (5) Do you conduct proper management to prevent contamination by incorrect use, admixture and mix-up at the delivery warehouse where products are stored?	<sample answer (the management method)> - to put a sign on products or packaging (label, etc.) for identification and allocate a special storage area <note & point of management> - For implementing the effectual management method to prevent contamination by incorrect use or admixture, the management method has to be in such a manner that anyone working in management doesn't make any mistake (ex. labeling, specialization, limiting the person in charge, etc.)			(5) Explain the specific management method to prevent contamination by incorrect use, admixture and mix-up at "the delivery warehouse where products are stored"						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

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No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
54	Process Control	Verification of Implementation	●			<Actions for prohibited substances> (6) Do you conduct proper management if there is a possibility of contamination by incorrect use, admixture or mix-up in the process other than (3)-(5) above?				(6) Explain the specific management method when there is a possibility of contamination by incorrect use, admixture and mix-up in the process other than (3)-(5) above?						
55	Process Control	Documentation		●		(7) Do you have any document which defines the procedure to implement (3)-(6) above?	<sample answer> - "Regulations of Process management (Document No. xxxx Revision 01)," Article No xxx : Management of prohibited substances - The procedure of production switching			(7) Enter the name of the document specifying the management procedures of prevention against contamination by incorrect use for the applicable processes. Also state its document no, an article name and revision no.						

4.4.5 Management at Delivery

Before delivering products, the organization shall verify products if they satisfy the management criteria of chemical substances in products for delivery and record the result accordingly. At receiving or during the manufacturing process, the organization shall verify again to ensure that all predetermined check items are completely verified. The organization shall also manage to prevent contamination by any incorrect shipment or mixed-up in the product warehouse.

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
56	Process Control	Verification of Criteria and Implementation	●			(1) Do you have clear "management criteria of chemical substances in products" for the stage of delivery?	<sample answer> - "Regulations of delivery verification" Article No. xxx : Evaluation of chemical substances in products (the criteria or procedures of delivery inspection, etc.) <note & point of management> In JIS Z 7201 "Management of chemical substances in products - Principles and Guidelines", delivery means shipping or sending products to the customer, but delivery does not include products sent to the next process in the organization			(1) Enter the name of the document which specifies the management criteria of chemical substances in products for the state of delivery						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

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No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
57	Process Control	Verification of Implementation	●			(2) In the management criteria for the stage of delivery, do you include whether or not the management criteria is satisfied at the stage of receiving and at the manufacturing process respectively?	<sample answer> - The company verifies the identification tag to check if products are manufactured in a specified process using specified materials <note & point of management> - The management criteria for delivery may include not only conducting management in the process, but also quality check at delivery - When the company finds "nonconformity" occurred at any of the processes between receiving and delivery, the company takes an action of "suspension of shipment" - Points of auditing the mixed production system: to pay attention to the solder flow process, inspection at issuing parts or if any check is done at testing, etc.			(2) Explain contents of verification and its method at delivery						
58	Process Control	Record	●			(3) Do you record the verification result show in (2) above?	<sample answer> - Delivery inspection tag - Process travel tag (travel sheet) - Identification tag - Process control record			(3)Enter the name of the record in which the verification result of the above (2) is recorded.						
59	Process Control	Documentation		●		(4) Do you have any document which defines the procedure to implement (1)-(3) shown above?	<sample answer> "Regulations of delivery verification (Document No. xxxx Revision 01)" Article No. xx : Receiving verification, Article No. xx: Process verification, Article No. xx: Evaluation of chemical substances in products			(4) Enter the name of the document which specifies the method of delivery verification. Also state its document no, an article name. revision no.						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

No	Action Details							by Self-Evaluating Organization			by Evaluation-Result Verifying Organization		Score	Improvement program	Evaluation after improvement program	Score after improvement program
	Main Classification	Sub-Classification	Question Flag: Step 1	Step 2	* marked by evaluator	Questions	Sample Answer / Note & Point of Management	Self-Evaluation Result	Score	Answer (Implementation details, Evidence name, etc.)	Judging Result	Judgment reason, memo, remarks, etc.				
4.4.6 Verification of the Management Status of Chemical Substances in Products at Outsourcing Organization																
When the organization outsources some processes such as product design and development or manufacturing to another organization, the organization shall verify the management status																
60	Process Control	Verification of Implementation	●			(1) Do you give instructions to the outsourcing organization in writing about the management items/the management contents of chemical substances in products?	<sample answer> - Production outsourcing agreement <note & point of management> - The company shall give instructions for necessary management items / management details of chemical substances in products to the outsourcing organization, corresponding to the type of outsourcing works - When the company assigns procurement of parts and materials to the outsourcing organization, responsibilities and authorities have to be defined.			(1) Enter the name of the record in which instructions to the outsourcing organizations about the management method of chemical substances in products are recorded.						
61	Process Control	Verification of Implementation	●			(2) Do you verify the implementation status of the instructions which you gave to the outsourcing organization as shown in (1) above?	<sample answer (verification details)> - The outsourcing organization purchases specified parts and materials from the genuine agent and produces under specified process conditions (production process, repair process, inspection process conditions, etc.) <sample answer (verification frequency)> - at least once every 2 years * however, depending on the risk of the outsourcing organizations, verification is done more frequently			(2) Explain the verification details and the frequency of verification						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

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No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
62	Process Control	Record	●			(3) Do you record the verification result shown in (2) above?	<sample answer> - List of evaluation results of the outsourcing organizations			(3) Enter the name of the verification record for (2) shown above						
63	Process Control	Documentation		●		(4) Do you have any document which defines the procedure to implement (1)-(3) shown above?	<sample answer> - "Regulations for the management of outsourcing organizations (Document No. xxxx Revision 01)" Article No. xx: Information delivery, Article No. xx : Requirement, Article No. xx: Evaluation			(4) Enter the name of the document specifying the management method of outsourcing organizations for "management of chemical substances in products". Also state its document, an article name, revision no.						

4.4.7 Traceability

The organization shall assure traceability of the information of chemical substances in products by appropriate manners in order to grasp, utilize, disclose and transfer the information of chemical substances in products swiftly.

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
64	Common Management	Verification of Implementation	●			(1) Do you manage in such a manner that you are able to trace from the delivered products about a receiving lot of components /parts/raw materials, manufacturing time, manufacturing process, outsourcing organizations and you are able to grasp, utilize, disclose and transfer the information of chemical substances in products promptly?	<sample answer> A lot number for the product is stated in the identification tag which is attached to a delivery verification sheet. This lot number ensures traceability as it is linked to the process information (including manufacturing process number or manufacturing time) as well as to a lot number of parts and materials input into the product. <note & point of management> - The manufacturing process includes processes of the supplier / the outsourcing organization - The lot number of end products enables to capture a lot number of parts and components used for end-products			(1) Explain the management method how to trace from the delivered products about a receiving lot of parts and component/raw material, manufacturing time, manufacturing place (process) or the outsourcing organization						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

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No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
65	Common Management	Record	●			(2) Do you make a record in order to manage traceability of the delivered products to identify a receiving lot of parts and components/raw material, manufacturing time, manufacturing process, the outsourcing organizations?	<sample answer> - Parts receiving records - Lot management record - Production record			(2) Explain the name of the record which can specify from delivered products about a receiving lot of parts, components and raw materials, manufacturing time, manufacturing place (process) and the outsourcing organizations						
66	Common Management	Documentation		●		(3) Do you have any document which defines the procedure to implement (1) shown above?	<sample answer> - "Regulations of process management (Document No. xxxx Revision 01)" Article No. xx : Traceability - "Rules of manufacturing control (Document No. xxxx Revision 01)" Article No. xx: Traceability "Operation Procedure"			(3) Enter the name of the document which specifies the procedure for traceability. Also state its document no, an article name and revision no.						

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4.4.8 Exchange of information with the customer																
The organization shall clearly define and implement the effective method of exchanging information with the customer for the following matters, and record details of such information exchange. **a) Laws, regulations and the industry criteria that are required by the customer to comply** **b) Information of chemical substances in products** **c) information on the management of chemical substances in products** **In case that any change is to be made to the information of chemical substances in products, the organization shall notify the customer prior to such a change**																
67	Common Management	Verification of Implementation	●			(1) Do you have and also implement any efficient and effective method of exchanging information with the customer and the supplier as well as asking for investigation and collecting information from them for a)～c) shown below? a) law, regulations and the industry criteria which needs to be complied by the customer or the supplier b) information of chemical substances in products c) information about management of chemical substances in products	<sample answer> a) Laws, regulations and the industry criteria which needs to be complied by the customer： ［When the company receives new requirement criteria from the customer, the company examines them immediately, lay down the system to support new requirements in "the regulations of external communication "and implement it accordingly］ b) Information of chemical substances in products： ［The company establishes and implements the system as provided in "the regulations of the external communication" which specifies to investigate prior to the survey request for the purpose of quick investigation and reply for the information of chemical substances in products ］ c) Information about management of chemical substances in products ： ［The company defines and implements the system as provided in "the regulations of external communication" which enables to make a quick response to evaluation on the management of chemical substances in products by the customer ］ <note & point of management> - The effective method of information exchange means that the effective system has been established in order to give a quick response to enquiries or evaluations			(1) Explain the method which enables to exchange information effectively with the customer or the supplier for the following a)～c) a) Laws, regulations and the industry criteria to which the customer is required to comply ： ［ b) Information of chemical substances in products ： ［ c) Information about management of chemical substances in products ［						
68	Common Management	Record	●			(2) Do you record the details of (1) above?	<sample answer> a) Laws, regulations and the industry criteria which needs to be complied by the customer： ［Receiving verification record - the customer's Green procurement criteria, etc.］ b) Information of chemical substances in products： ［Survey response record for information of chemical substances in products］ c) Information about management of chemical substances in products： ［Record of response for the evaluation on management of chemical substances in products by the customer ］			(2) Enter the name of evidence record a) Laws, regulations and the industry criteria which needs to be compiled by the customer ： ［ b) Information of chemical substances in products ： ［ c) Information about management of chemical substances in products ： ［						

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69	Common Management	Verification of Implementation		●		(3) If the customer requests, do you submit the evidence for "non-inclusion of prohibited substances" as specified in the management criteria of chemical substances in products to the customer ?	＜sample answer＞ In which case? ： ［upon the customer's request for recycled resin］ Evidence ： ［Measurement data of prohibited substances or the certificate of no-use issued by the material manufacturer			(3) If you submit the evidence about prohibited substances to the customer, explain for which case and what type of evidence you submit to the customer In which case ： ［ Evidence ： ［						
70	Common Management	Documentation		●		(4) Do you have any document which defines the procedure to implement (1)-(3) shown above?	<sample answer> "Regulations of external communication" Document No. xxxx Revision 01			(4) Enter the name of the document which specifies information communication to the customer. Also state its document no, an article name and revision no.						

4.4.9 Change management

The organization shall extract changeable elements which may affect declarable chemical substances under the management criteria of chemical substances in products. When any change arises, before the actual change is taken place, the organization shall effectually confirm a change to be made to the information of chemical substances in products and verify if the management criteria of chemical substances in products can still be fulfilled. The organization shall document the procedures of change management and record the result of change.

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	* marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
71	Common Management	Verification of Implementation	●			(1) Have you defined items subject to change management?	<sample answer> The followings are applicable to change management in the organization internally, at the supplier and at the outsourcing organizations - supplier, outsourcing organization - parts, material - process (production equipment, manufacturing condition, mold/die, tools and jigs, etc.) <note & point of management> - 4 elements of production that are "Man", "Machine", "Material" and "Method" are included in change management - Not only changes in the organization internally, but also any change taken place in the supplier or the outsourcing organization should be subject to change management			(1) List the items which are subject to change management						

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72	Common Management	Verification of Implementation	●			(2) If some change is going to be made to an item subject to change management internally in the organization as shown in (1), do you verify whether or not a change can conform to the management criteria of chemical substances in products prior to a change taken place?	<sample answer> The company verifies the following - Verification details for the supplier or the outsourcing organization : if the supplier or the outsourcing organization has and operates the management system of chemical substances in products which can satisfy the management criteria of chemical substances in products - Verification details about parts and materials: if parts or materials satisfy the purchase management criteria - Verification details about process (production equipment, manufacturing condition, mold/die, tool and jig, etc.): if the process satisfies the management criteria of chemical substances in product for the stage of manufacturing			(2) If any change arises to an item subject to change management in the organization internally as shown in (1), explain about verification details to identify the conformance status with the management criteria of chemical substances in product prior to a change taken place						
73	Common Management	Verification of Implementation	●			(3) If some change is going to be made to an item subject to change management in the supplier / in the outsourcing organization as in (1) above, do you verify whether or not a change can conform to the management criteria of chemical substances in products prior to a change taken place?	<sample answer> The company verifies as shown below - Verification details for the supplier or the outsourcing organization: if the supplier or the outsourcing organization has and implements the management system of chemical substances in products which can satisfy the management criteria of chemical substances in products - Verification details about parts and materials: if parts or materials satisfy the purchase management criteria * measurement data if necessary <note & point of management> - The procedures of change management shall be disseminated to the suppliers (including 2nd, 3rd tier, and lower tier supplier...)			(3) If any change arises to an item subject to change management in the supplier or in the outsourcing organization as in (1), explain about verification details to identify the conformance status with the management criteria of chemical substances in products prior to a change taken place						

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No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
74	Common Management	Verification of Implementation	●			(4) If any change arises to an item subject to change management in the organization internally / at the supplier/ the outsourcing organization as in (1) above, do you report about it to the customer before a change is made?	<sample answer> - The company has and operates the system to notify a change (supplier, material, process, etc.) and the conformance status with the management criteria of chemical substances in products to the customer prior to a change taken place. <note & point of management> - It is important that a change should be made after communicating with the customer - It is important to report to the customer about the conformance status to the management criteria of chemical substances in products, no matter how the outcome is			(4) If any change arises to an item subject to change management in the organization internally, at the supplier / the outsourcing organization as in (1), explain about the reporting method to the customer before a change takes place						
75	Common Management	Record	●			(5) Do you record the verification result when a change is made as in (2)-(4) above?	<sample answer> In-house：[xxx Co. Ltd. Application of process change (in-house use)] Supplier/Outsourcing organization : [xxx Co. Ltd. Application of process change (for supplier use)] Customer：[Application of process change (Use the format specified by the customer)]			(5) Enter the name of the document which records the result of (2)～(4) above In-house： [Supplier/Outsourcing organization： [Customer： [						
76	Common Management	Documentation	●			(6) Do you have any document which defines the procedure to implement (1)-(5) above?	<sample answer> - "Regulations of change management (Document No. xxxx Revision 01)" Article No.xx: Application of change, Article no. xx: Customer's approval - The procedure to verify no inclusion of prohibited substances <note & point of management> - The company shall specify the contact flow among supplier / outsourcing organization / customer			(6)Enter the name of the document which specifies about change management. Also state its document no, an article name, revision no.						

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4.4.10 Management of Chemical Substance in Product at Occurrence of Nonconformity																
The organization shall develop and document the method of in-house contacts, the method of contacting suppliers, outsourcing organizations and customers as well as the temporary corrective actions, in order to respond to any nonconformity arising relating to chemical substances in products. After the temporary measure is taken, the organization shall investigate and identify the cause, determine and implement the necessary countermeasures to prevent recurrence of nonconformity. The organization shall take the preventive measures to avoid any occurrence of nonconformity. The organization shall record the responses taken at nonconformity.																
77	Common Management	Verification of Implementation	●			(1) Do you have clarified procedures for the following in case of occurrence of nonconformance to chemical substances in products (hereinafter called "non-conformance item") ? - Contacting procedure from the supplier/the outsourcing organization - In-house contacting procedure and the procedures of deciding measures - Reporting procedure to the customer	<sample answer> Contacting procedure from the supplier / the outsourcing organization：[In case any nonconformance occurred in the supplier or in the outsourcing organization, the company instructs to contact the purchasing department immediately] In-house contacting procedure and the procedure of deciding measures ：[The department which found nonconformance shall contact the quality control department immediately using the contact card. Quality control department shall call all related departments for a meeting and discuss measures corresponding to the critical level of nonconformance] Contacting procedures to the customer：[In case of occurrence of nonconformance, the company shall contact the customer immediately and keep the customer updated about the measures] <note & point of management> - The company shall clarify the definition of "nonconformance" to the supplier and the outsourcing organizations - The company defines the critical level of nonconformance of products and specifies actions corresponding to the level - The company has set a rule to report to the external			(1) Enter the procedure for the following when nonconformance item is found Contacting procedure from the supplier/the outsourcing organization : [In-house contacting procedure and the procedures to decide measures : [Reporting procedure to the customer : [						
78	Common Management	Verification of Implementation	●			(2) Do you have clear procedures requesting the supplier/the outsourcing organization to inform swiftly about nonconformance occurred at the supplier/the outsourcing organization?	<sample answer> Requesting document ：[Green procurement criteria] Requesting contents：[When the supplier / the outsourcing organization finds that products to be delivered do not conform to the company's management criteria of chemical substances in products, the supplier/outsourcing organization shall inform the company immediately] <note & point of management> - The company shall set a reporting period in advance for the supplier/the outsourcing organization to inform to the company (to the customer) or request the supplier/the outsourcing organization to report immediately when nonconformance is found			(2) Enter the name of the document in which the company requests the supplier/the outsourcing organization to report immediately about nonconformance. Also explain about details of the request Requesting document : [Requesting details : [						

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79	Common Management	Verification of Implementation	●			(3) Do you have clarified procedures to prevent expansion of nonconformance by taking a temporary action at occurrence of nonconformance?	<sample answer (temporary action)> The manufacturing department shall take the following actions as a temporary measure - To identify the influenced area (to identify a first nonconformance lot or equipment of causing non-conformance) - To prevent expansion (suspension of production, suspension of delivery, isolation) - Identification management (isolating nonconformance items from conformance items or put an identification sign) <note & point of management> - It is important to identify the influenced area, to prevent expansion or to manage by identifying nonconformance from conformance items			(3) Explain action details specifying prevention of expansion at occurrence of nonconformance						
80	Common Management	Verification of Implementation	●			(4) Do you have clarified procedures to investigate the cause and/or to take actions and preventive measures?	<sample answer> - The manufacturing department has specified to investigate a cause and to take actions and preventive measures and to report them in "Product-Nonconformance contact card /report" to the quality assurance department <note & point of management> - The company has established the procedure to take corrective actions against the cause of nonconformance or the preventive measures of recurrence such as revising the criteria			(4) Explain about the contents specifying a cause investigation, countermeasure and preventive measures						
81	Common Management	Verification of Implementation	●			(5) Do you have specified procedures to apply the preventive measures of recurrence extensively?	<sample answer> - Quality assurance department shall examine the preventive measures of recurrence and decide whether or not the measures should be implemented extensively based on collected "Product-nonconformance contact card / report"			(5) Explain about the contents specifying the extensive implementation of preventive measures of recurrence						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

Action Details

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
82	Common Management	Verification of Implementation	●			(6) Do you have any specified procedures to record actions taken at nonconformance?	<sample answer> - Contact card - Product nonconformance problem			(6) Enter the name of the document in which actions are recorded at occurrence of nonconformance						
83	Common Management	Documentation	●			(7) Do you have a document which defines the procedure to implement (1)-(6) shown above?	<sample answer> - "Regulations of measures against nonconformance (Document No. xxxx Revision 01)" Article no. xx : Actions against nonconformance products Article no. xx : Isolation of nonconformance products Article no. xx : Corrective actions, extensive implementation Article no. xx: Retention of record			(7) Enter the name of the document which specifies actions to be taken at nonconformance for chemical substances in products. Also state its document no., an article name, revision no.						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

Action Details

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
4.5 Management of Human Resources, Document and Information :							This check sheet is compliant to JIS Z 7201:2012 "Management of Chemical Substances in Products - Principles and Guidelines", however "4.5 Management of Human Resources, Document and Information" is only a title without specific details. Therefore, no question is given under 4.5									
4.5.1 Education and Training																
	The organization shall develop the contents of each management and operation module that are necessary to train and educate for management of chemical substances in products. The organization shall identify works and personnel to be engaged in management of chemical substances in products, and conduct the necessary training and education, and record accordingly.															
84	Common Management	Documentation	●			(1)Do you specify targeted staffs required for training as well as the contents of education/training for each operation and management module?	<sample answer> Target staff (1) : [person in charge of material, person in charge of manufacturing] Contents of training (1) : [Identification management at parallel production (storage, production switching, cleaning, etc.)] Target staff (2) : [person in charge of judging inspection data/input data] Contents of training (2) : [Specialized training of chemical management / the management criteria of chemical substances in products (latest version)"] <note & point of management> - Operation and Management refers to "4.4.2 Management of chemical substances in product at design and development"-"4.4.10 Management of chemical substances in products at occurrence of nonconformity"			(1) List the staffs required for education and contents of training target staff (1) : [contents of training (1) : [target staff (2) : [contents of training(2) : [target staff (3) : [contents of training(3) : [						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

Action Details

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
85	Common Management	Record	●			(2) Do you conduct education and training as shown in (1) above and record it accordingly?	<sample answer> - Training record - "Chemical substances in products - survey / judging staff training"			(2) Enter the name of the document which contains a record of education and training						
86	Common Management	Documentation		●		(3) Do you have a document which specifies the procedure to implement (1)-(2) above?	<sample answer> - "Regulations of management of chemical substances in products (Document No. xxxx Revision 01)" Article no. xx : Education and training			(3) Enter the name of the document which specifies educations for management of chemical substances in products. Also state its document no. an article name, revision no.						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

Action Details

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
4.5.2 Management of document and record																
	The organization shall manage the documents including "the procedures required to be documented" and the records as required in the action items of the Guidelines as well as the procedures and the records which are determined by the organization as necessary.															
87	Common Management	Verification of Implementation	●			(1) Do you manage the documents for management of chemical substances in products (documents verified in this check sheet)?	<sample answer> - "XX Co. Ltd, The system diagram for documents of chemical substances in products" - "XX Co. Ltd. List of documents related to chemical substances in products" <note & point of management> - It is recommended to manage the documents systematically using a list of document or a system diagram of document, etc. - in the document system, the revision history of each document shall be specified - Documentation on management of chemical substances in products should be kept in the environment where authorized persons are able to view and verify the latest version, and documentation should be reviewed whenever necessary			(1) Enter the name of the record which shows the document system for management of chemical substances in products (documents verified in this check sheet)						
88	Common Management	Record		●		(2) Do you keep the operation records relating to management of chemical substances in products?	<sample answer> - Product assessment report (retention period xx years) - Evaluation List of the suppliers (retention period xx years） - Evaluation list of the outsourcing organizations (retention period xx years) - Receiving inspection performance sheet (retention period xx years) - Test piece analysis report (retention period xx years） - Identification tag (retention period xx years） - Lot management record (retention period xx years） - Receiving verification record of the customer's green procurement criteria, etc. (retention period xx years） - Survey response record for information of chemical substances in products (retention period xx year） - Response record of the evaluation by the customer concerning management of chemical substances in products (retention period xx years） - Application for process change (retention period xx years) - Chemical substances in products - survey and judging staff training (retention period xx years) - Internal audit report (retention period xx years) - Management review report (retention period xx years) <note & point of management> - Operation record means a verification record for respective items - The company shall set a retention period for each operation record and manage it accordingly - If a retention period is regulated by the law or as the customer's requirement, the company shall set a retention			(2) List the name of the record kept by the company and its retention period respectively. * If the space is not enough to list all the records in this cell, the existing record (such as a management list of records, etc.) can be alternatively used						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

Action Details

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
89	Common Management	Documentation		●		(3) Do you have any document which defines the procedure to implement (1)-(2) shown above?	<sample answer> - "Regulations of environmental documentation management (Document No. xxx Revision 01)"			(3) Enter the name of the document specifying management of documents and records. Also state its document no., an article name and revision no.						

4.6 Evaluation and Improvement of Implementation Status

The organization shall evaluate the management status of chemical substances in products periodically at a predetermined frequency. The organization shall implement corrective actions to matters which require correction. The organization shall record the result of evaluation and the corrective actions and report it to top managers of the management of chemical substances in products. The top management in chemical substances in products shall review the result of evaluation and the corrective actions.

90	Common Management	Verification of Implementation	●			(1) Do you evaluate the management status of chemical substances in products periodically at predetermined frequency?	<sample answer> Verification frequency：[once a year] Verification method：[Internal audit for management of chemical substances in products]			(1) Enter the verification frequency of management of chemical substances in products and its verification method Verification frequency： [Verification method： [Verification details： [						
91	Common Management	Verification of Implementation	●			(2) Do you take necessary corrective actions?	<sample answer> - Corrective action report			(2) Enter the name of the record which shows implementation of necessary corrective actions						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

Action Details

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
92	Common Management	Record	●			(3) Do you record the evaluation result and the result of corrective actions?	<sample answer> - Internal audit report <note & point of management> If the company incorporates internal audit into ISO9001, ISO14001 or others, it is advisable that internal audit reports specifies "the scope of audit" in the report to indicate that auditing is also conducted for chemical substances in products			(3) Enter the name of the record which shows the evaluation result or the result of corrective actions						

Action Items (extract from Guidelines for the Management of Chemical Substances in Products, Ver.3.0)

Action Details

No	Main Classification	Sub-Classification	Question Flag: Step 1	Question Flag: Step 2	Question Flag: * marked by evaluator	Questions	Sample Answer / Note & Point of Management	by Self-Evaluating Organization: Self-Evaluation Result	by Self-Evaluating Organization: Score	by Self-Evaluating Organization: Answer (Implementation details, Evidence name, etc.)	by Evaluation-Result Verifying Organization: Judging Result	by Evaluation-Result Verifying Organization: Judgment reason, memo, remarks, etc.	Score	Improvement program	Evaluation after improvement program	Score after improvement program
93	Common Management	Verification of Implementation	●			(4) Do you report the evaluation result and the result of corrective actions to the top managers concerning management of chemical substances in products? Is the review conducted based on the above report?	<sample answer> - Management review report <note & point of management> If the company incorporates internal audit into ISO9001, ISO14001 or others, it is advisable that internal audit reports specifies "the scope of audit" in the report to indicate that auditing is also conducted for chemical substances in products			(4) Enter the name of the record which shows the result of review by the top management concerning management of chemical substances in products.						
94	Common Management	Documentation		●		(5) Do you have any document which defines the procedure to implement (1)-(4) shown above?	<sample answer> - "Regulations for management of chemical substances in products (Document No. xxxx Revision 01)" Article no. xx: Management review			(5) Enter the name of the document specifying evaluation of the implementation status and implementation of improvement. Also state its document no, an article name and revision no.						

Rank	First		< Criterion > A rank: 100 points B rank: There is an improvement plan ..80-99 points without incompatible. C rank: There is an improvement plan ..50-79 points without incompatible. D rank: 49 points or less suitable are combined, exist, and it	Self-Evaluation Result 100 point full marks conversion value	Point	The 1st points in evaluation 100 point full marks conversion value	Point	Evaluation point after it improves it 100 point full marks conversion value	Point
	After improve								

Appendix 3 : List of Environmentally Hazardous Substance (Group)

	Environmentally hazardous substances（Group）
1	ozone depleting substances
2	greenhouse substances
3	chloroform
4	glycol ether and its acetates
5	organic brominated solvents
6	benzene
7	aldehyde compounds
8	organic chlorinated solvents
9	cadmium and its compounds
10	mercury and its compounds
11	lead and its compounds
12	hexavalent chromium compounds
13	lead, mercury, cadmiun, hexavalent chromium and phthalic esters in wrapping material
14	organostannic compounds
15	beryllium and its compounds
16	asbestos
17	chlorinated flame retardants / brominated flame retardants
18	polychlorinated naphthalene
19	poly chlorinated biphenyl : PCB poly chlorinated terphenyls : PCT
20	chlorinated paraffins
21	azo dye/pigment forming specified amine compounds
22	azodyes that can form carcinogenic amines, selected
23	radioactive substances
24	antimony and its compounds
25	chromium and its compounds（except hexavalent chromium compounds）
26	selenium and its compounds
27	nickel and its compounds
28	arsenic and its compounds
29	organophosphorus compounds
30	polyvinyl chloride
31	phthalic esters
32	perfluorooctane sulfonate and its related substances
33	polycyclic aromatic hydrocarbons and its mixtures
34	mineral fibres (natural or synthetic) except continuous filament fibres
35	biocidal coatings / biocidal additives
36	volatile organic compounds (VOC)
37	hexachlorobenzene
38	chlorinated or brominated dioxins or furans
39	dodecachloropentacyclo 1, 3, 4-metheno-1H-cyclobuta(cd)pentalene, mirex
40	4-nitrobiphenyl and its salts
41	n-nitrosamines
42	specified organic pigment

	Environmentally hazardous substances（Group）
43	PFOA and its salts, perfluorooctanoic acids C8F15O2X (X = H, NH4, and metal salts)
44	nonylphenol ethoxylates
45	perchlorates
46	benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene (BNST)
47	halogen contain substances for plastic additives
48	dinitrogen oxide
49	substances of very high concern identification on REACH Regulation
50	substances placed on GADSL

Appendix 4 : List of Environmentally Hazardous Substance Control Standard

	Environmentally hazardous substances	Application division	Control level	Tolerance (threshold)	Specified Chemical Substance
					Target
1	ozone depleting substances	Chemically formed	Prohibited	unintended inclusion	
					Use prohibition in manufacturing process including supplier. Except for using as cooling medium
		Article	Prohibited	unintended inclusion	
					contains ozone-depleting substance
2	greenhouse substances	Chemically formed	Prohibited	unintended inclusion	The substances whose GWP (100 years) is 1500 or large and the substances in table 12.
					All usage except for producing thin film formation, and using as cooling medium
			Controlled	unintended inclusion	The substances whose GWP (100 years) is 1500 or large
					For producing thin film formation
			Controlled	unintended inclusion	The substances whose GWP 100 year value of less than 1500.
					All usage except for using as cooling medium
3	chloroform	Chemically formed	Prohibited	unintended inclusion	
					All applications
		Aritcle	Controlled	unintended inclusion 1000ppm	
					All applications
4	glycol ether and its acetates	Chemically formed	Prohibited	unintended inclusion	With regards to proven reproductive toxicant. Refer to Table3. And diethleneglycol dimethylether(CAS NO.111-96-6)
					All applications
			Controlled	unintended inclusion 1000ppm	
					All applications
5	organic brominated solvents	Chemically formed	Prohibited	unintended inclusion	All usages that proven reproductive toxicant that lists in table 4. Or other proven reproductive toxicant.
					All applications
			Controlled	unintended inclusion 1000ppm	
					All applications excepting above.

	Environmentally hazardous substances	Application division	Control level	Tolerance (threshold)	Specified Chemical Substance
					Target
6	benzene	Chemically formed	Prohibited	unintended inclusion	
					All applications
		Aritcle	Prohibited	1000ppm	
					All applications excepting fuel constituent.
7	aldehyde compounds	Chemically formed	Controlled	unintended inclusion	
					All applications
		Aritcle	Prohibited	75ppm	
					It limits it to textile goods and the adhesive (usage that always contacts with the human body for wigs and for socks, etc.).
			Controlled	unintended inclusion 1000ppm	
					All applications
8	organic chlorinated solvents	Chemically formed	Prohibited	unintended inclusion	
					All applications
		Aritcle	Prohibited	1000ppm	carbon tetrachloride, and 1,1,1-trichloroethane
					All applications
			Controlled	unintended inclusion 1000ppm	
					All applications
9	cadmium and its compounds	Chemically formed	Prohibited	unintended inclusion	
					All applications
		Aritcle	Prohibited	5ppm	
					plastic, pigment, ink, paint, rubber
				20ppm	
					solder
				100ppm	
					All applications other than the above.
			Controlled	unintended inclusion 100ppm	Applications exempted from the prohibition in RoHS Article (Table 1)
10	mercury and its compounds	Chemically formed	Prohibited	unintended inclusion	
					All applications
		Aritcle	Prohibited	1000ppm	
					All applications
			Controlled	unintended inclusion 1000ppm	
					Applications exempted from the prohibition in RoHS Article (Table 1)

	Environmentally hazardous substances	Application division	Control level	Tolerance (threshold)	Specified Chemical Substance
					Target
11	lead and its compounds	Chemically formed	Prohibited	unintended inclusion	
					All applications
			Controlled	1000ppm	
					Applications exempted from the prohibition in RoHS Article.
		Aritcle	Prohibited	100ppm	
					plastic, ink, paint, rubber
				unintended inclusion 1000ppm	
					All applications other than the above.
			Controlled	unintended inclusion 1000ppm	Applications exempted from the prohibition in RoHS Article. *Applies to lead in high melting temperature type solders for internal connections (i.e. lead-based alloys containing 85% by weight or more lead), as long as these solders are not exposed through external use.
12	hexavalent chromium compounds	Chemically formed	Prohibited	unintended inclusion	
					All applications
		Aritcle	Prohibited	1000ppm	
					All applications.
13	lead, mercury, cadmiun, hexavalent chromium and phthalic esters in wrapping material	Aritcle	Prohibited	Sum of Pb, Cd, Hg, Cr (VI): 100 ppm or less. However, cadmium in plastics: less than 5 ppm	lead, mercury, Cadmium, hexavalent chromium
					ALL packaging components and materials.
				unintended inclusion 1000ppm	All usages that phthalic esters that lists in table 6 (Ⅲ).
					ALL packaging components and materials. Including Adhesive, ink etc.
			Controlled	unintended inclusion 1000ppm	phthalic esters
					ALL packaging components and materials. Including Adhesive, ink etc.

	Environmentally hazardous substances	Application division	Control level	Tolerance (threshold)	Specified Chemical Substance
					Target
14	organostannic compounds	Chemically formed	Prohibited	1000ppm	preparation that contains "tri-substituted organiostannic compounds"
					All applications.
				Tin concentration must be less than 1000ppm	dibutyl tin compounds and dioctyl tin compounds
					All applications.
		Aritcle	Prohibited	1000ppm	preparation that contains "tri-substituted organiostannic compounds"
					All applications.
			Prohibited	Tin concentration must be less than 1000ppm	dibutyl tin compounds
					All applications.
			Prohibited	Tin concentration must be less than 1000ppm	dioctyl tin compounds
					textile articles intended to come into contact with the skin, two-component room temperature vulcanisation moulding kits (RTV-2 moulding kits), and childcare articles.
			Controlled	unintended inclusion 1000ppm	
					All applications
15	beryllium and its compounds	Chemically formed	Prohibited	unintended inclusion 1000ppm	
					All the usages excluding alloy contains beryllium less than 3%.
		Aritcle	Prohibited	unintended inclusion 1000ppm	
					All usages except dopant for semiconductor process, and alloy contains beryllium less than 3%.
			Controlled	unintended inclusion	
					Applies dopant for semiconductor process, and alloy contains beryllium less than 3%.
16	asbestos	Chemically formed	Prohibited	unintended inclusion	
					All applications
		Aritcle	Prohibited	1000ppm	
					All applications

	Environmentally hazardous substances	Application division	Control level	Tolerance (threshold)	Specified Chemical Substance
					Target
17	chlorinated / brominated flame retardants	Aritcle	Prohibited	unintended inclusion	Chlorinated flame retardants except of "products name, Dechlorane Plus（CAS No.13560-89-9）". And substances in table 10.
					All applications
			Controlled	unintended inclusion 1000ppm	Limited applies "products name, Dechlorane Plus（CAS No.13560-89-9）". Refer to "chlorinated paraffins substance group" in case "PVB", or "middle, long chain chlorinated paraffin" is used as a flame retardant. Follow the standard of the "organophosphorus compound" about the flame retardant that contains chlorine element in table11. Brominated flame retardants except of Table 10.
					All applications
18	polychlorinated naphthalene	Chemically formed	Prohibited	unintended inclusion	contains in the number of chlorine is greater than 2
					All applications
		Aritcle	Prohibited	1000ppm	contains in the number of chlorine is greater than 2
					All applications
19	PCB : poly chlorinated biphenyl PCT : poly chlorinated terphenyls	Chemically formed	Prohibited	unintended inclusion	
					All applications
		Aritcle	Prohibited	1000ppm	
					All applications
20	chlorinated paraffins	Chemically formed	Prohibited	unintended inclusion	contains short chain (C10-13,) chlorinated paraffins
					All applications
		Aritcle	Prohibited	1000ppm	contains short chain (C10-13,) chlorinated paraffins
					All applications
			Controlled	unintended inclusion 1000ppm	
					All applications

	Environmentally hazardous substances	Application division	Control level	Tolerance (threshold)	Specified Chemical Substance
					Target
21	azo dye/pigment forming specified amine compounds	Chemically formed	Prohibited	unintended inclusion	generates specific amine in table 5.
					All applications
		Aritcle	Prohibited	30ppm	generates specific amine in table 5.
					fiber, textile, leather material
			Prohibited	1000ppm	generates specific amine in table 5.
					Usage are in prolonged contact with the human skin
			Controlled	unintended inclusion 1000ppm	
					All applications
22	azodyes that can form carcinogenic amines,selected	Chemically formed	Prohibited	unintended inclusion	
					All applications
		Aritcle	Prohibited	unintended inclusion 1000ppm	
					All applications
23	radioactive substances	Chemically formed	Prohibited	unintended inclusion	
					All applications
24	antimony and its compounds	Aritcle	Controlled	unintended inclusion 1000ppm	
					All applications.
25	chromium and its compounds（except hexavalent chromium compounds）	Aritcle	Controlled	unintended inclusion 1000ppm	
					All applications.
26	selenium and its compounds	Aritcle	Controlled	unintended inclusion 1000ppm	
					All applications.
27	nickel and its compounds	Aritcle	Controlled	unintended inclusion 1000ppm	
					All applications.
28	arsenic and its compounds	Aritcle	Prohibited	-	"arsenic acid, lead (4+) salt" applies to the lead compound
					All applications.
			Controlled	unintended inclusion 1000ppm	except for "arsenic acid, lead (4+) salt"
					All applications.

	Environmentally hazardous substances	Application division	Control level	Tolerance (threshold)	Specified Chemical Substance
					Target
29	organophosphorus compounds	Chemically formed	Prohibited	unintended inclusion	It is limited to the substances, 1. tris-(1-aziridinyl) phosphine oxide(CAS No.545-55-1) 2. tris(2,3-dibromopropyl)phosphate [tris](CAS No.126-72-7)
					All applications.
		Aritcle	Prohibited	1000ppm	It is limited to the substances, 1. tris-(1-aziridinyl) phosphine oxide(CAS No.545-55-1) 2. tris(2,3-dibromopropyl)phosphate [tris](CAS No.126-72-7)
					All applications.
			Controlled	unintended inclusion 1000ppm	except two materials of prohibition
					All applications.
30	polyvinyl chloride	Aritcle	Controlled	unintended inclusion 1000ppm	
					All applications.
31	phthalic esters	Chemically formed	Prohibited	unintended inclusion	All usages that contain phthalic ester that lists in table 6 (I, II).
					All applications.
		Aritcle	Prohibited	1000ppm	All usages that contain phthalic ester that lists in table 6 (I, II).
					used for plastic material whose applications are toys and nursery products.
			Prohibited	1000ppm	All usages that contain phthalic ester (III) that lists in table 6.
					All applications.
			Controlled	unintended inclusion 1000ppm	
					All applications.
32	perfluorooctane sulfonate and its related substances	Aritcle	Prohibited	1000ppm	Table 7: PFOS and its related substances
					All applications. However, the applications described below are excluded; A) Photo resist used in the photolithography processes, or when used as antireflective coating agent B) Photographic coating agent used for film, paper and lithographic plate.
				1μg/m2	textiles, coating agent

	Environmentally hazardous substances	Application division	Control level	Tolerance (threshold)	Specified Chemical Substance
					Target
33	polycyclic aromatic hydrocarbons and its mixtures	Aritcle	Controlled	unintended inclusion 1ppm	-It is a usage in the person in which a long term touches long term is following ・Three times or more for ten minutes per two weeks. ・One time or more for 30 minutes per two weeks. Ex. Sporting goods such as bicycle, golf clubs, rackets, sportswear, Utensil, Clothes, shoes, gloves Clock strap, wristband, Mask -Usage of tire and progress oil for tire
34	mineral fibres (natural or synthetic) except continuous filament fibres	Aritcle	Controlled	unintended inclusion 1000ppm	All applications.
35	biocidal coatings / biocidal additives	Aritcle	Prohibited	0.1ppm	dimethyl fumarate（CAS：624-49-7）
					All applications
			Controlled	unintended inclusion 1000ppm	All applications
36	volatile organic compounds	Process	Prohibited	1000ppm	dichloromethane, trichloroethylene, and chloroform, applies to organic chlorinated solvents
					All applications
			Controlled	unintended inclusion 1000ppm	except prohibited substances in Table 8
					Aplies to all applications
37	hexachlorobenzene	Aritcle	Prohibited	unintended inclusion	All applications.
38	chlorinated or brominated dioxins or furans	Aritcle	Prohibited	unintended inclusion 10ppb	All applications.
39	dodecachloropentacyclo 1, 3, 4-metheno-1H-cyclobuta(cd)pentalene, mirex	Aritcle	Prohibited	1000ppm	All applications.
40	4-nitrobiphenyl and its salts	Chemically formed	Prohibited	unintended inclusion	All applications.
		Aritcle	Controlled	100ppm	All applications.

	Environmentally hazardous substances	Application division	Control level	Tolerance (threshold)	Specified Chemical Substance
					Target
41	N-nitrosamines	Chemically formed	Prohibited	unintended inclusion	
					All applications.
		Aritcle	Prohibited	unintended inclusion	It is limited to the substance, N-nitroso dimethyl amine(CAS No: 62-75-9).
					All applications.
			Controlled	unintended inclusion 1000ppm	except for N-nitroso dimethyl amine(CAS No: 62-75-9).
					All applications.
42	specified organic pigment	Chemically formed	Prohibited	unintended inclusion	The organic pigment including PCB above 50ppm.
					All applications.
43	PFOA (PFOA and its salts, perfluorooctanoic acids C8F15O2X (X = H, NH4, and metal salts))	Aritcle	Prohibited	unintended inclusion 1000ppm	
					All applications.
44	nonylphenol ethoxylates	Aritcle	Controlled	unintended inclusion 1000ppm	
					All applications.
45	perchlorates	Aritcle	Prohibited	-	The lead compound and the mercury compound apply to each standard.
					All applications.
			Controlled	unintended inclusion 1000ppm	except for the lead compound and the mercury compound
					All applications.
46	benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene(BNST)	Chemically formed	Prohibited	unintended inclusion	
					All applications.
		Aritcle	Prohibited	unintended inclusion 1000ppm	
					All applications.
47	halogen contain substances for plastic additives	Aritcle	Controlled	unintended inclusion 1000ppm	Compound of halogen (chlorine and bromine) element
					Limits to use additive for plastic except the flame retardant.
48	dinitrogen oxide	Chemically formed	Prohibited	unintended inclusion	
					All applications.
		Aritcle	Prohibited	unintended inclusion 1000ppm	
					All applications.

	Environmentally hazardous substances	Application division	Control level	Tolerance (threshold)	Specified Chemical Substance
					Target
49	substances of very high concern identification on REACH reguiation	Aritcle	Prohibited	-	Substances on Table 9, it is prohibited substances 0n this standard.
					All applications.
			Controlled	unintended inclusion 1000ppm	Substances on Table 9, except for prohibited substances on this standard.
					All applications.
50	substances on GADSL（substances placed on GADSL）	Aritcle	Prohibited	-	Substances on GADSL, it is prohibited substances.
			Controlled	unintended inclusion 1000ppm	Substances on GADSL, except for prohibited substances on this standard.
					All applications using for automobile.

Table 1-1: Applications exempted from the prohibition in RoHS Article Category 1～7, 11

This list is the contents of the "Official Journal of the European Union" at May, 2018.
Apply the latest version when the content is revised.
There is no expiration date that the expiration date is an empty column at this time.

No.	Exemption	Scope and dates of applicability
1	Mercury in single capped (compact) fluorescent lamps not exceeding (per burner):	
1(a)	For general lighting purposes < 30 W	2,5 mg shall be used per burner after 31 December 2012
1(b)	For general lighting purposes ≥ 30 W and < 50 W	3,5 mg may be used per burner after 31 December 2011
1(c)	For general lighting purposes ≥ 50 W and < 150 W : 5mg	
1(d)	For general lighting purposes ≥ 150 W: 15 mg	
1(e)	For general lighting purposes with circular or square structural shape and tube diameter ≤ 17 mm	7 mg may be used per burner after 31 December 2011
1(f)	For special purposes: 5 mg	
1(g)	Mercury in single capped (compact) fluorescent lamps for general lighting purposes < 30 W with a lifetime equal or above 20 000 h:not exceeding (per burner) 3.5 mg	31 Decmber 2017
2(a)	Mercury in double-capped linear fluorescent lamps for general lighting purposes not exceeding (per lamp):	
2(a)(1)	Tri-band phosphor with normal lifetime and a tube diameter < 9 mm (e.g. T2):	4 mg may be used per lamp after 31 December 2011
2(a)(2)	Tri-band phosphor with normal lifetime and a tube diameter > 9 mm and ≤ 17 mm (e.g. T5):	3 mg may be used per lamp after 31 December 2011
2(a)(3)	Tri-band phosphor with normal lifetime and a tube diameter > 17 mm and ≤ 28 mm (e.g. T8):	3.5 mg may be used per lamp after 31 December 2011
2(a)(4)	Tri-band phosphor with normal lifetime and a tube diameter > 28 mm (e.g. T12): 3.5 mg	
2(a)(5)	Tri-band phosphor with long lifetime (≥ 25 000 h): 5 mg	5 mg may be used per lamp after 31 December 2012
2(b)	Mercury in other fluorescent lamps not exceeding (per lamp):	
2(b)(1)	Linear halophosphate lamps with tube > 28 mm (e.g. T10 and T12): 10 mg	Expires on 13 April 2012
2(b)(2)	Non-linear halophosphate lamps (all diameters): 15 mg	Expires on 13 April 2016
2(b)(3)	Non-linear tri-band phosphor lamps with tube diameter > 17 mm (e.g. T9)	15 mg may be used per lamp after 31 December 2011
2(b)(4)	Lamps for other general lighting and special purposes (e.g. induction lamps)	15 mg may be used per lamp after 31 December 2011
3	Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes not exceeding (per lamp):	
3(a)	Short length (≤ 500 mm)	3,5 mg may be used per lamp after 31 December 2011

No.	Exemption	Scope and dates of applicability
3(b)	Medium length (> 500 mm and ≤ 1 500 mm)	3.5 mg may be used per lamp after 31 December 2011
3(c)	Long length (> 1 500 mm)	13 mg may be used per lamp after 31 December 2011
4(a)	Mercury in other low pressure discharge lamps (per lamp)	15 mg may be used per lamp after 31 December 2011
4(b)	Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner) in lamps with improved colour rendering index Ra > 60:	
4(b) Ⅰ	P ≤ 155 W	30 mg may be used per burner after 31 December 2011
4(b) Ⅱ	155 W < P ≤ 405 W	40 mg may be used per burner after 31 December 2011
4(b) Ⅲ	P > 405 W	40 mg may be used per burner after 31 December 2011
4(c)	Mercury in other High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner):	
4(c) Ⅰ	P ≤ 155 W	25 mg may be used per burner after 31 December 2011
4(c) Ⅱ	155 W < P ≤ 405 W	30 mg may be used per burner after 31 December 2011
4(c) Ⅲ	P > 405 W	40 mg may be used per burner after 31 December 2011
4(d)	Mercury in High Pressure Mercury (vapour) lamps (HPMV)	Expires on 13 April 2015
4(e)	Mercury in metal halide lamps (MH)	
4(f)	Mercury in other discharge lamps for special purposes not specifically mentioned in this Annex	
4(g)	Mercury in hand crafted luminous discharge tubes used for signs, decorative or architectural and specialist lighting and light-artwork, where the mercury content shall be limited as follows: (a) 20 mg per electrode pair + 0.3 mg per tube length in cm, but not more than 80 mg, for outdoor applications and indoor applications exposed to temperatures below 20 °C; (b) 15 mg per electrode pair + 0.24 mg per tube length in cm, but not more than 80 mg, for all other indoor applications.	Expires on 31 December 2018
5(a)	Lead in glass of cathode ray tubes	Expires on 21 July 2016
5(b)	Lead in glass of fluorescent tubes not exceeding 0.2 % by weight	

No.	Exemption	Scope and dates of applicability
6(a)	Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0,35 % lead by weight	Expires on: — 21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments; — 21 July 2023 for category 8 in vitro diagnostic medical devices; — 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.
6(a)(1)	Lead as an alloying element in steel for machining purposes containing up to 0,35 % lead by weight and in batch hot dip galvanised steel components containing up to 0,2 % lead by weight	Expires on 21 July 2021 for categories 1-7 and 10.’
6(b)	Lead as an alloying element in aluminium containing up to 0,4 % lead by weight	Expires on: — 21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments, — 21 July 2023 for category 8 in vitro diagnostic medical devices, — 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.
6(b)- I		Expires on 21 July 2021 for categories 1-7 and 10.
6(b)(2)		Expires on 18 May 2021 for categories 1-7 and 10.’
6(c)	Copper alloy containing up to 4 % lead by weight	Expires on: — 21 July 2021 for categories 1-7 and 10, — 21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments, — 21 July 2023 for category 8 in vitro diagnostic medical devices, — 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.’
7(a)	Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)	Expires on: — 21 July 2021 for categories 1-7 and 10, — 21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments, — 21 July 2023 for category 8 in vitro diagnostic medical devices, — 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.’
7(b)	Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission, and network management for telecommunications	Expires on 21 July 2017

No.	Exemption	Scope and dates of applicability
7(c) Ⅰ	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound	Expires on: — 21 July 2021 for categories 1-7 and 10, — 21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments, — 21 July 2023 for category 8 in vitro diagnostic medical devices, — 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.'
7(c) Ⅱ	Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher	
7(c) Ⅲ	Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC	Expires on 1 January 2013
7(c) Ⅳ	Lead in PZT based dielectric ceramic materials for capacitors which are part of integrated circuits or discrete	
8(a)	Cadmium and its compounds in one shot pellet type thermal cut-offs	Expires on 1 January 2012
8(b)	Cadmium and its compounds in electrical contacts	
9	Hexavalent chromium as an anticorrosion agent of the carbon steel cooling system in absorption refrigerators up to 0,75 % by weight in the cooling solution	
9(b)	Lead in bearing shells and bushes for refrigerant-containing compressors for heating, ventilation, air conditioning and refrigeration (HVACR) applications	Applies to categories 8, 9; expires on: -21 July 2023 for category8 in vitro diagnostic medical devices, -21 July 2024 for category 9 industrial monitoring and control instruments and control instruments and for category 11 -21 July 2021 for other subcategories of categories 8 and 9.
9(b)-(I)	Lead in bearing shells and bushes for refrigerant-containing hermetic scroll compressors with a stated electrical power input equal or below 9 kw for heating, ventilation, air conditioning and refrigeration (HVACR) applications	Applies to categories 1; expires on: 21 July 2019
11(a)	Lead used in C-press compliant pin connector systems	Expires on 24 September 2010
11(b)	Lead used in other than C-press compliant pin connector systems	Expires on 1 January 2013
12	Lead as a coating material for the thermal conduction module C-ring	Expires on 24 September 2010
13(a)	Lead in white glasses used for optical applications	Applies to all categories; expires on: - 21 July 2023 for category 8 in vitro diagnostic medical devices; -21 July 2024 for category 9 industrial monitoring and control instruments and for category 11; - 21 July 2021 for all other categories and subcategories

No.	Exemption	Scope and dates of applicability
13(b)	Cadmium and lead in filter glasses and glasses used for reflectance standards	Applies to categories 8, 9 and 11; expires on: - 21 July 2023 for category 8 in vitro diagnostic medical devices; -21 July 2024 for category 9 industrial monitoring and control instruments and for category 11; -21 July 2021 for other subcategories of categories 8 and 9
13(b)-(I)	Lead in ion coloured optical filter glass types	Applies to categories 1 to 7 and 10; expires on 21 July 2021 for categories 1 to 7 and 10
13(b)-(II)	Cadmium in striking optical filter glass types; excluding applications falling under point 39 of this Annex	
13(b)-(III)	Cadmium and lead in glazes used for reflectance standards	
14	Lead in solders consisting of more than two elements for the connection between the pins and the package of microprocessors with a lead content of more than 80 % and less than 85 % by weight	Expires on 1 January 2011
15	Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages	
16	Lead in linear incandescent lamps with silicate coated tubes	Expires on 1 September 2013
17	Lead halide as radiant agent in high intensity discharge (HID) lamps used for professional reprography applications	Expires on 21 July 2016
18(a)	Lead as activator in the fluorescent powder (1 % lead by weight or less) of discharge lamps when used as speciality lamps for diazoprinting reprography, lithography, insect traps, photochemical and curing processes containing phosphors such as SMS ((Sr,Ba) 2 MgSi 2 O 7 :Pb)	Expires on 1 January 2011
18(b)	Lead as activator in the fluorescent powder (1 % lead by weight or less) of discharge lamps when used as sun tanning lamps containing phosphors such as BSP (BaSi 2 O 5 :Pb)	
19	Lead with PbBiSn-Hg and PbInSn-Hg in specific compositions as main amalgam and with PbSn-Hg as auxiliary amalgam in very compact energy saving lamps (ESL)	Expires on 1 June 2011
20	Lead oxide in glass used for bonding front and rear substrates of flat fluorescent lamps used for Liquid Crystal Displays (LCDs)	Expires on 1 June 2011
21	Lead and cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses	
23	Lead in finishes of fine pitch components other than connectors with a pitch of 0,65 mm and less	Expires on 24 September 2010

No.	Exemption	Scope and dates of applicability
24	Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors	Expires on: — 21 July 2021 for categories 1-7 and 10, — 21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments, — 21 July 2023 for category 8 in vitro diagnostic medical devices, — 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.’
25	Lead oxide in surface conduction electron emitter displays (SED) used in structural elements, notably in the seal frit and frit ring	Expires on 21 Jully 2016
26	Lead oxide in the glass envelope of black light blue lamps	Expires on 1 June 2011
27	Lead alloys as solder for transducers used in high-powered (designated to operate for several hours at acoustic power levels of 125 dB SPL and above) loudspeakers	Expired on 24 September 2010
29	Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC	
30	Cadmium alloys as electrical/mechanical solder joints to electrical conductors located directly on the voice coil in transducers used in high-powered loudspeakers with sound pressure levels of 100 dB (A) and more	Expires on 21 Jully 2016
31	Lead in soldering materials in mercury free flat fluorescent lamps (which e.g. are used for liquid crystal displays, design or industrial lighting)	Expires on 21 Jully 2016
32	Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes	
33	Lead in solders for the soldering of thin copper wires of 100 µm diameter and less in power transformers	Expires on 21 Jully 2016
34	Lead in cermet-based trimmer potentiometer elements	Expires on: — 21 July 2021 for categories 1-7 and 10, — 21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments, — 21 July 2023 for category 8 in vitro diagnostic medical devices, — 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.’
36	Mercury used as a cathode sputtering inhibitor in DC plasma displays with a content up to 30 mg per display	Expired on 1 June 2010
37	Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body	
38	Cadmium and cadmium oxide in thick film pastes used on aluminium bonded beryllium oxide	Expires on 21 Jully 2016
39	Cadmium in colour converting II-VI LEDs (< 10 µg Cd per mm 2 of light-emitting area) for use in solid state illumination or display systems	Expires on 31 October 2019 for all categories

No.	Exemption	Scope and dates of applicability
40	Cadmium in photoresistors for analogue optocouplers applied in professional audio equipment	Expires on 31 December 2013
41	Lead in solders and termination finishes of electrical and electronic components and finishes of printed circuit boards used in ignition modules and other electrical and electronic engine control systems, which for technical reasons must be mounted directly on or in the crankcase or cylinder of hand-held combustion engines (classes SH:1, SH:2, SH:3 of Directive 97/68/EC of the European Parliament and of the Council.	Expires on 31 December 2018

About categories in remarks (from ANNEX Ⅰ Categories of EEE covered)

Category 1	Large household appliances
Category 2	Small household appliances
Category 3	IT and telecommunications equipment
Category 4	Consumer equipment
Category 5	Lighting equipment
Category 6	Electrical and electronic tools
Category 7	Toys, leisure and sports equipment
Category 8	Medical devices
Category 9	Monitoring and control instruments including industrial monitoring and control instruments
Category 10	Automatic dispensers
Category 11	Other EEE not covered by any of the categories above

Table 1-2: Applications exempted from the prohibition in RoHS Article Category 8, 9

This list is the contents of the "Official Journal of the European Union" at Nov, 2014.

Apply the latest version when the content is revised.

There is no expiration date that the expiration date is an empty column at this time.

Equipment utilising or detecting ionising radiation

1	Lead, cadmium and mercury in detectors for ionising radiation
2	Lead bearings in X-ray tubes.
3	Lead in electromagnetic radiation amplification devices: micro-channel plate and capillary plate.
4	Lead in glass frit of X-ray tubes and image intensifiers and lead in glass frit binder for assembly of gas lasers and for vacuum tubes that convert electromagnetic radiation into electrons.
5	Lead in shielding for ionising radiation.
6	Lead in X-ray test objects.
7	Lead stearate X-ray diffraction crystals.
8	Radioactive cadmium isotope source for portable X-ray fluorescence spectrometers.

Sensors, detectors and electrodes

1a	Lead and cadmium in ion selective electrodes including glass of pH electrodes.
1b	Lead anodes in electrochemical oxygen sensors.
1c	Lead, cadmium and mercury in infra-red light detectors
1d	Mercury in reference electrodes: low chloride mercury chloride, mercury sulphate and mercury oxide.

Others

9	Cadmium in helium-cadmium lasers.
10	Lead and cadmium in atomic absorption spectroscopy lamps.
11	Lead in alloys as a superconductor and thermal conductor in MRI
12	Lead and cadmium in metallic bonds creating superconducting magnetic circuits in MRI, SQUID, NMR (Nuclear Magnetic Resonance) or FTMS (Fourier Transform Mass Spectrometer) detectors.
13	Lead in counterweights.
14	Lead in single crystal piezoelectric materials for ultrasonic transducers.
15	Lead in solders for bonding to ultrasonic transducers.
16	Mercury in very high accuracy capacitance and loss measurement bridges and in high frequency RF switches and relays in monitoring and control instruments not exceeding 20 mg of mercury per switch or relay.
17	Lead in solders in portable emergency defibrillators.
18	Lead in solders of high performance infrared imaging modules to detect in the range 8-14 μm.
19	Lead in Liquid crystal on silicon (LCoS) displays.
20	Cadmium in X-ray measurement filters.
21	Cadmium in phosphor coatings in image intensifiers for X-ray images. Cadmium in phosphor coatings in spare parts for X-ray systems placed on the EU market before 1 January 2020.
22	Lead acetate marker for use in stereotactic head frames for use with CT and MRI and in positioning systems for gamma beam and particle therapy equipment.
23	Lead as an alloying element for bearings and wear surfaces in medical equipment exposed to ionising radiation.

24	Lead enabling vacuum tight connections between aluminium and steel in X-ray image intensifiers.
25	Lead in the surface coatings of pin connector systems requiring nonmagnetic connectors which are used durably at a temperature below – 20 °C under normal operating and storage conditions.
26	Lead in: solders on printed circuit boards; termination coatings of electrical and electronic components and coatings of printed circuit boards; solders for connecting wires and cables; and solders connecting transducers and sensors; that are used durably at a temperature below – 20 °C under normal operating and storage conditions.
27	Lead in: solders; termination coatings of electrical and electronic components and printed circuit boards; and connections of electrical wires, shields and enclosed connectors; which are used in (a) magnetic fields within the sphere of 1 m radius around the isocentre of the magnet in medical magnetic resonance imaging equipment, including patient monitors designed to be used within this sphere, or (b) magnetic fields within 1 m distance from the external surfaces of cyclotron magnets, magnets for beam transport and beam direction control applied for particle therapy.
28	Lead in solders for mounting cadmium telluride and cadmium zinc telluride digital array detectors to printed circuit boards.
29	Lead in alloys, as a superconductor or thermal conductor, used in cryo-cooler cold heads and/or in cryo-cooled cold probes and/or in cryo-cooled equipotential bonding systems, in medical devices (category 8) and/or in industrial monitoring and control instruments.
30	Hexavalent chromium in alkali dispensers used to create photocathodes in X-ray image intensifiers. Hexavalent chromium in alkali dispensers used to create photocathodes in spare parts for X-ray systems placed on the EU market before 1 January 2020.
31	Lead, cadmium and hexavalent chromium in reused spare parts, recovered from medical devices placed on the market before 22 July 2014 and used in category 8 equipment placed on the market before 22 July 2021, provided that reuse takes place in auditable closed-loop business-to-business return systems, and that the reuse of parts is notified to the consumer.
32	Lead in solders on printed circuit boards of detectors and data acquisition units for Positron Emission Tomographs which are integrated into Magnetic Resonance Imaging equipment.
33	Lead in solders on populated printed circuit boards used in Directive 93/42/EEC class IIa mobile medical devices other than portable emergency defibrillators. Lead in solders on populated printed circuit boards used in Directive 93/42/EEC class IIb mobile medical devices other than portable emergency defibrillators.
34	Lead as an activator in the fluorescent powder of discharge lamps when used for extracorporeal photopheresis lamps containing BSP ($BaSi_2O_5$:Pb) phosphors.
35	Mercury in cold cathode fluorescent lamps for back-lighting liquid crystal displays, not exceeding 5 mg per lamp, used in industrial monitoring and control instruments placed on the market before 22 July 2017.
36	Lead used in other than C-press compliant pin connector systems in spare parts for industrial monitoring and control instruments placed on the market before 1 January 2021.
37	Lead in platinized platinum electrodes used for conductivity measurements where at least one of the following conditions applies: (a) wide-range measurements with a conductivity range covering more than 1 order of magnitude (e.g. range between 0.1 mS/m and 5 mS/m) in laboratory applications for unknown concentrations; (b) measurements of solutions where an accuracy of +/– 1% of the sample range and where high corrosion resistance of the electrode are required for any of the following: (i) solutions with an acidity < pH 1; (ii) solutions with an alkalinity > pH 13; (iii) corrosive solutions containing halogen gas; (c) measurements of conductivities above 100 mS/m that must be performed with portable instruments. Expires on 31 December 2018. (The extension is being applied for until 31 December 2025.)
38	Lead in solder in one interface of large area stacked die elements with more than 500 interconnects per interface which are used in spare parts for CT and X-ray systems placed on the market before 1 January 2020.

39	Lead in micro-channel plates (MCPs) used in industrial monitoring and control instruments where at least one of the following properties is present: (a) a compact size of the detector for electrons or ions, where the space for the detector is limited to a maximum of 3 mm/MCP (detector thickness + space for installation of the MCP), a maximum of 6 mm in total, and an alternative design yielding more space for the detector is scientifically and technically impracticable; (b) a two-dimensional spatial resolution for detecting electrons or ions, where at least one of the following applies: (i) a response time shorter than 25 ns; (ii) a sample detection area larger than 149 mm2; (iii) a multiplication factor larger than 1.3 × 103; (c) a response time shorter than 5 ns for detecting electrons or ions; (d) a sample detection area larger than 314 mm2 for detecting electrons or ions; (e) a multiplication factor larger than 4.0 × 107.
40	Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC for industrial monitoring and control instruments. Expires on 31 December 2020. May be used after that date in spare parts for industrial monitoring and control instruments placed on the market before 1 January 2021.
41	Lead as a thermal stabiliser in polyvinyl chloride (PVC) used as base material in amperometric, potentiometric and conductometric electrochemical sensors which are used in in-vitro diagnostic medical devices for the analysis of blood and other body fluids and body gases. Expires on 31 December 2018.(The extension is being applied.)
42	Mercury in electric rotating connectors used in intravascular ultrasound imaging systems capable of high operating frequency (> 50 MHz) modes of operation. Expires on 30 June 2019.
43	Cadmium anodes in Hersch cells for oxygen sensors used in industrial monitoring and control instruments, where sensitivity below 10 ppm is required. Expires on 15 July 2023.

Table 2: Applications exempted from the prohibition in ELV Article

This list is the contents of the "Official Journal of the European Union" at May, 2016.

Apply the latest version when the content is revised.

There is no expiration date that the expiration date is an empty column at this time.

Material	No.	Exemption	Scope and dates of applicability
Lead			
	Lead as an alloying element		
	1(a)	Steel for machining purposes and batch hot dip galvanised steel components containing up to 0.35% lead by weight	
	1(b)	Continuously galvanised steel sheet containing up to 0.35% lead by weight	Vehicles type approved before 1 January 2016 and spare parts for these vehicles.
	2(a)	Aluminium for machining purposes with a lead content up to 2% by weight	As spare parts for vehicles put on the market brfore 1 July 2005
	2(b)	Aluminium with a lead content up to 1.5% by weight	As spare parts for vehicles put on the market brfore 1 July 2008
	2(c)	Aluminium with a lead content up to 0,4% by weight	
	3	Copper alloy containing up to 4% lead by weight	
	4(a)	Bearing shells and bushes	As spare parts for vehicles put on the market brfore 1 July 2008
	4(b)	Bearing shells and bushes in engines, transmissions and air conditioning compressors	As spare parts for vehicles put on the market brfore 1 July 2011
	Lead and lead compounds in components		
	5	Batteries	
	6	Vibration dampers	Vehicles type approved before 1 January 2016 and spare parts for these vehicles.
	7(a)	Vulcanising agents and stabilisers for elastomers in brake hoses, fuel hoses, air ventilation hoses, elastomer/metal parts in the chassis applications, and engine mountings	As spare parts for vehicles put on the market before 1 July 2005
	7(b)	Vulcanising agents and stabilisers for elastomers in brake hoses, fuel hoses, air ventilation hoses, elastomer/metal parts in the chassis applications, and engine mountings containing up to 0.5% lead by weight	As spare parts for vehicles put on the market before 1 July 2006
	7(c)	Bonding agents for elastomers in powertrain applications containing up to 0.5% lead by weight	As spare parts for vehicles put on the market before 1 July 2009

Material	No.	Exemption	Scope and dates of applicability
Lead			
	Lead and lead compounds in components		
	8(a)	Lead in solders to attach electrical and electronic components to electronic circuit boards and lead in finishes on terminations of components other than electrolyte aluminium capacitors, on component pins and on electronic circuit boards	Vehicles type approved before 1 January 2016 and spare parts for these vehicles
	8(b)	Lead in solders in electrical applications other than soldering on electronic circuit boards or on glass.	Vehicles type approved before 1 January 2011 and spare parts for these vehicles.
	8(c)	Lead in finishes on terminals of electrolyte aluminium capacitors.	Vehicles type approved before 1 January 2013 and spare parts for these vehicles.
	8(d)	Lead used in soldering on glass in mass airflow sensors	Vehicles type approved before 1 January 2015 and spare parts of such vehicles
	8(e)	Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead)	
	8(f)(a)	Lead in compliant pin connector systems	Vehicles type-approved before 1 January 2017 and spare parts of such vehicles
	8(f)(b)	Lead in compliant pin connector systems other than the mating area of vehicle harness connectors	
	8(g)	Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages	
	8(h)	Lead in solder to attach heat spreaders to the heat sink in power semiconductor assemblies with a chip size of at least 1cm2 of projection area and a nominal current density of at least 1 A/mm2 of silicon chip area	Vehicles type-approved before 1 January 2016 and spare parts for these vehicles
	8(i)	Lead in solders in electrical glazing applications on glass except for soldering in laminated glazing	Vehicles type approved before 1 January 2016 and spare parts for these vehicles
	8(j)	Lead in solders for soldering in laminated glazing	Vehicles type-approved before 1 January 2020 and spare parts for these vehicles

Material	No.		Exemption	Scope and dates of applicability
		9	Valve seats	As spare parts for engine types developed before 1 July 2003
		10(a)	Electrical and electronic components which contain lead in a glass or ceramic, in a glass or ceramic matrix compound, in a glass-ceramic material, or in a glass-ceramic matrix compound. This exemption does not cover the use of lead in: -glass in bulbs and glaze of spark plugs, -dielectric ceramic materials of components listed under 10(b), 10(c) and 10(d).	
		10(b)	Lead in PZT based dielectric ceramic materials of capacitors being part of integrated circuits or discrete semiconductors	
Lead				
	Lead and lead compounds in components			
		10(c)	Lead in dielectric ceramic materials of capacitors with a rated voltage of less than 125 V AC or 250 V DC	Vehicles type approved before 1 January 2016 and spare parts for these vehicles
		10(d)	Lead in the dielectric ceramic materials of capacitors compensating the temperature-related deviations of sensors in ultrasonic sonar systems	Vehicles type-approved before 1 January 2017 and spare parts for these vehicles
		11	Pyrotechnic initiators	Vehicles type approved before 1 July 2006 and spare parts for these vehicles
		12	Lead-containing thermoelectric materials in automotive electrical applications to reduce CO2 emissions by recuperation of exhaust heat	Vehicles type approved before 1 January 2019 and spare parts for these vehicles
Hexavalent chromium				
		13(a)	Corrosion preventive coatings	As spare parts for vehicles put on the market before 1 July 2007
		13(b)	Corrosion preventive coatings related to bolt and nut assemblies for chassis applications	As spare parts for vehicles put on the market before 1 July 2008
		14	As an anti-corrosion agent of the carbon steel cooling system in absorption refrigerators in motor caravans up to 0.75 weight -% in the cooling solution except where the use of other cooling technologies is practicable (i.e. available on the market for the application in motor caravans) and does not lead to negative environmental, health and/or consumer safety impacts	

Material	No.	Exemption	Scope and dates of applicability
Mercury			
	15(a)	Discharge lamps for headlight application	Vehicles type approved before 1 July 2012 and spare parts for these vehicles
	15(b)	Fluorescent tubes used in instrument panel displays	Vehicles type approved before 1 July 2012 and spare parts for these vehicles
Cadmium			
	16	Batteries for electrical vehicles	As spare parts for vehicles put on the market before 31 December 2008

Table 3: Glycol ether and its acetates with regards to proven reproductive toxicant.

	Substance	CAS No.
1	2-ethoxyethanol	110-80-5
2	2-ethoxyethyl acetate	111-15-9
3	methyl cellosolve acetate / 2-methoxyethyl acetate	110-49-6
4	2-methoxyethanol	109-86-4
5	diethleneglycol dimethylether	111-96-6

Table 4: Organic brominated solvents with regards to proven reproductive toxicant.

	Substance	CAS No.
1	2-bromopropane	75-26-3

Table 5: Specific amine
(generated due to decomposition of azo group greater than 1)

	Substance	CAS No.
1	4-aminoazobenzene	60-09-3
2	aniline, 2-methoxy-	90-04-0
3	2-naphthylamine	91-59-8
4	3,3'-dichlorobenzidine	91-94-1
5	biphenyl-4-ylamine	92-67-1
6	benzidine	92-87-5
7	ortho-toluidine	95-53-4
8	4-chloro-o-toluidine	95-69-2
9	toluene-2,4-diamine	95-80-7
10	2-methyl-4-(2-tolyldiazenyl)aniline	97-56-3
11	2-methyl-5-nitroaniline	99-55-8
12	4,4'-methylenebis-(2-chlorobenzenamine)	101-14-4
13	4,4'-methylenedianiline	101-77-9
14	4,4'-oxydianiline	101-80-4
15	4-chloroaniline	106-47-8
16	3,3'-dimethoxybenzidine	119-90-4
17	3,3'-dimethylbenzidine	119-93-7
18	6-methoxy-m-toluidine	120-71-8
19	2,4,5-trimethylaniline	137-17-7
20	4,4'-thiodianiline	139-65-1
21	4-methoxy-1,3-phenylenediamine	615-05-4
22	4,4'-methylenedi-o-toluidine	838-88-0
23	2,4-xylidine	95-68-1
24	p-toluidine	106-49-0
25	aniline	62-53-3

Table 6: Specified phthalic esters

( ) shows other representative names.

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	Substance	CAS No.
Specified phthalic esters（Group Ⅰ）		
1	bis(2-ethylhexan-1-yl) phthalate （Bis (2-ethylhexyl) phthalate (DEHP)）	117-81-7
2	dibutan-1-yl phthalate （Dibutyl phthalate (DBP)）	84-74-2
3	benzyl butan-1-yl phthalate （Benzyl butyl phthalate (BBP)）	85-68-7
Specified phthalic esters（Group Ⅱ）		
4	diisononyl phthalate (DINP)	28553-12-0 68515-48-0
5	1,2-benzenedicarboxylic acid diisodecyl ester （di-isodecyl phthalate (DIDP)）	26761-40-0 68515-49-1
6	bis(n-octyl) phthalate (DNOP)	117-84-0

Commission Delegated Directive(EU) 2015/863 of 31 March amending Annex II to Directive 2011/65/EU of the European Parliament and of the Council as regards the list of restricted substances(Text with EEA relevance)

Specified phthalic esters（Group Ⅲ）

	Substance	CAS No.
1	bis (2-ethyl(hexyl)phthalate) (DEHP)	117-81-7
2	dibutan-1-yl phthalate(DBP)	84-74-2
3	benzyl butan-1-yl phthalate(BBP)	85-68-7
4	diisobutyl phthalate (DIBP)	84-69-5

Table 7: PFOS and its related substances

( ) shows other representative names.

	Substance	CAS No.
1	perfluorooctane sulfonate (PFOS)	1763-23-1
2	perfluoroctane sulfonate acid	1763-23-1
3	perfluoroctane sulfonate anion	45298-90-6
4	perfluoro-1-octanesulfonyl fluoride	307-35-7
5	2-propenoic acid, 2-methyl-, dodecyl ester, polymers with 2-[methyl[(perfluoro-C4-8-alkyl)- sulfonyl]amino]ethyl acrylate and vinylidene chloride	306975-62-2
6	glycine, N-ethyl-N-[(heptadecafluorooctyl)sulfonyl]-, potassium salt	2991-51-7
7	perfluorooctane sulfonate ammonium salt	29081-56-9
8	perfluorooctane sulfonate lithium salt	29457-72-5
9	tetraethylammoniumheptadecafluoroctansulfonate	56773-42-3
10	PFOS related substances	

Table 8: volatile organic compounds (VOC)

	Substance	CAS No.
1	propan-2-ol	67-63-0
2	toluene	108-88-3
3	acetone	67-64-1
4	butyl acetate	123-86-4
5	methanol	67-56-1
6	xyrene	1330-20-7
7	2-butanone	78-93-3
8	dichloromethane	75-09-2
9	styrene	100-42-5
10	ethanol	64-17-5
11	ethylbenzene	100-41-4
12	tetrahydrofuran	109-99-9
13	2-propanol, 1-methoxy-	107-98-2
14	1-butanol	71-36-3
15	chloroform	67-66-3
16	methyl isobutyl ketone	108-10-1
17	heptane	142-82-5
18	ethyl acetate	141-78-6
19	trichloroethylene	79-01-6
20	cyclohexanone	108-94-1

Table 9: REACH Candidate List of SVHC

	Substance	CAS No.
1	anthracene	120-12-7
2	4,4'- diaminodiphenylmethane (MDA)	101-77-9
3	dibutyl phthalate (DBP)	84-74-2
4	cobalt dichloride	7646-79-9
5	diarsenic pentaoxide	1303-28-2
6	diarsenic trioxide	1327-53-3
7	sodium dichromate sodium dichromate	7789-12-0 10588-01-9
8	1-tert-Butyl-3,5-dimethyl-2,4,6-trinitrobenzene 5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2
9	bis (2-ethyl(hexyl)phthalate) (DEHP)	117-81-7
10	hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α – HBCDD, β-HBCDD, γ-HBCDD)	25637-99-4 3194-55-6 134237-51-7 134237-50-6 134237-52-8
11	alkanes, C10-13, chloro (short chain chlorinated paraffins)	85535-84-8
12	bis(tributyltin)oxide (TBTO)	56-35-9
13	lead hydrogen arsenate	7784-40-9
14	benzyl butyl phthalate (BBP)	85-68-7
15	triethyl arsenate	15606-95-8
16	anthracene oil	90640-80-5
17	anthracene oil, anthracene paste, distn. lights	91995-17-4
18	anthracene oil, anthracene paste, anthracene fraction	91995-15-2
19	anthracene oil, anthracene-low	90640-82-7
20	anthracene oil, anthracene paste	90640-81-6
21	pitch, coal tar, high temp.	65996-93-2
22	aluminosilicate refractory ceramic fibres	AL57
23	zirconia aluminosilicate, refractory ceramic fibres	AL58
24	2,4-dinitrotoluene	121-14-2
25	diisobutyl phthalate (DIBP)	84-69-5
26	lead chromate	7758-97-6
27	lead chromate molybdate sulphate red (C.I. pigment red 104)	12656-85-8
28	lead sulfochromate yellow (C.I. pigment yellow 34)	1344-37-2
29	tris(2-chloroethyl)phosphate	115-96-8
30	acrylamide	79-06-1
31	trichloroethylene	79-01-6
32	boric acid boric acid	10043-35-3 11113-50-1
33	tetraboron disodium heptaoxide tetraboron disodium heptaoxide tetraboron disodium heptaoxide	1303-96-4 1330-43-4 12179-04-3
34	tetraboron disodium heptaoxide, hydrate	12267-73-1
35	sodium chromate	7775-11-3
36	potassium chromate	7789-00-6
37	ammonium dichromate	7789-09-5

	Substance	CAS No.
38	potassium dichromate	7778-50-9
39	cobalt(II) sulphate	10124-43-3
40	cobalt(II) dinitrate	10141-05-6
41	cobalt(II) carbonate	513-79-1
42	cobalt(II) diacetate	71-48-7
43	2-methoxyethanol	109-86-4
44	2-ethoxyethanol	110-80-5
45	chromium trioxide	1333-82-0
46	Acids generated from chromium trioxide and their oligomers:	AL13
	chromic acid	7738-94-5
	dichromic acid	13530-68-2
	Oligomers of chromic acid and dichromic acid	AL13
47	2-ethoxyethyl acetate	111-15-9
48	strontium chromate	7789-06-2
49	1,2-Benzenedicarbo xylic acid, di-C7-11 -branched and linear alkyl esters (DHNUP)	68515-42-4
50	hydrazine hydrazine	7803-57-8 302-01-2
51	1-methyl-2-pyrrolidone	872-50-4
52	1,2,3-trichloropropane	96-18-4
53	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters,C7-rich (DIHP)	71888-89-6
54	dichromium tris(chromate)	24613-89-6
55	potassium hydroxyoctaoxodizincatedi-chromate	11103-86-9
56	pentazinc chromate octahydroxide	49663-84-5
57	formaldehyde, oligomeric reaction products with aniline	25214-70-4
58	bis(2-methoxyethyl) phthalate	117-82-8
59	2-methoxyaniline; o-anisidine	90-04-0
60	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9
61	1,2-dichloroethane	107-06-2
62	bis(2-methoxyethyl) ether	111-96-6
63	arsenic acid	7778-39-4
64	calcium arsenate	7778-44-1
65	trilead diarsenate	3687-31-8
66	N,N-dimethylacetamide	127-19-5
67	2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4
68	phenolphthalein	77-09-8
69	lead azide lead diazide	13424-46-9
70	lead styphnate	15245-44-0
71	lead dipicrate	6477-64-1
72	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2
73	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4
74	Diboron trioxide	1303-86-2
75	Formamide	75-12-7
76	Lead(II) bis(methanesulfonate)	17570-76-2
77	TGIC (1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione)	2451-62-9
78	β-TGIC (1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione)	59653-74-6
79	4,4'-bis(dimethylamino)benzophenone (michler's ketone)	90-94-8
80	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (michler's base)	101-61-1
81	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. basic violet 3)	548-62-9

	Substance	CAS No.
82	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. basic blue 26)	2580-56-5
83	α,α-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. solvent blue 4)	6786-83-0
84	4,4'-bis(dimethylamino)-4"-(methylamino)trityl alcohol	561-41-1
85	bis(pentabromophenyl) ether (DecaBDE)	1163-19-5
86	pentacosafluorotridecanoic acid	72629-94-8
87	tricosafluorododecanoic acid	307-55-1
88	henicosafluoroundecanoic acid	2058-94-8
89	heptacosafluorotetradecanoic acid	376-06-7
90	diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3
91	cyclohexane-1,2-dicarboxylic anhydride (hexahydrophthalic anhydride - HHPA) cyclohexane-1,2-dicarboxylic anhydride (hexahydrophthalic anhydride - HHPA) cyclohexane-1,2-dicarboxylic anhydride (hexahydrophthalic anhydride - HHPA)	85-42-7 13149-00-3 14166-21-3
92	hexahydromethylphathalic anhydride hexahydro-4-methylphathalic anhydride hexahydro-1-methylphathalic anhydride hexahydro-3-methylphathalic anhydride	25550-51-0 19438-60-9 48122-14-1 57110-29-9
93	4-nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a	AL61
94	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated - [covering well-defined substances and UVCB substances, polymers and homologues]	AL62
95	methoxyacetic acid	625-45-6
96	N,N-dimethylformamide; dimethyl formamide	68-12-2
97	dibutyltin dichloride (DBTC)	683-18-1
98	lead monoxide (lead oxide)	1317-36-8
99	orange lead (lead tetroxide)	1314-41-6
100	lead bis(tetrafluoroborate)	13814-96-5
101	trilead bis(carbonate)dihydroxide	1319-46-6
102	lead titanium trioxide	12060-00-3
103	lead titanium zirconium oxide	12626-81-2
104	silicic acid, lead salt	11120-22-2
105	silicic acid, barium salt, lead-doped	68784-75-8
106	1-bromopropane; n-propyl bromide	106-94-5
107	methyloxirane (propylene oxide)	75-56-9
108	1,2-benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0
109	diisopentylphthalate (DIPP)	605-50-5
110	N-pentyl-isopentylphtalate	776297-69-9
111	1,2-diethoxyethane	629-14-1
112	acetic acid, lead salt, basic	51404-69-4
113	lead oxide sulfate	12036-76-9
114	[phthalato(2-)]dioxotrilead	69011-06-9
115	dioxobis(stearato)trilead	12578-12-0
116	fatty acids, C16-18, lead salts	91031-62-8
117	lead cynamidate	20837-86-9

	Substance	CAS No.
118	lead dinitrate	10099-74-8
119	pentalead tetraoxide sulphate	12065-90-6
120	pyrochlore, antimony lead yellow	8012-00-8
121	sulfurous acid, lead salt, dibasic	62229-08-7
122	tetraethyllead	78-00-2
123	tetralead trioxide sulphate	12202-17-4
124	trilead dioxide phosphonate	12141-20-7
125	furan	110-00-9
126	diethyl sulphate	64-67-5
127	dimethyl sulphate	77-78-1
128	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2
129	dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7
130	4,4'-methylenedi-o-toluidine	838-88-0
131	4,4'-oxydianiline and its salts	101-80-4
132	4-aminoazobenzene	60-09-3
133	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7
134	6-methoxy-m-toluidine (p-cresidine)	120-71-8
135	biphenyl-4-ylamine	92-67-1
136	o-aminoazotoluene	97-56-3
137	o-toluidine	95-53-4
138	N-methylacetamide	79-16-3
139	Cadmium	7440-43-9
140	Cadmium oxide	1306-19-0
141	Dipentyl phthalate (DPP)	131-18-0
142	4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof]	AL63
143	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
144	Pentadecafluorooctanoic acid (PFOA)	335-67-1
145	cadmium sulphide	1306-23-6
146	dihexyl phthalate	84-75-3
147	disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0
148	disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38)	1937-37-7
149	imidazolidine-2-thione; 2-imidazoline-2-thiol	96-45-7
150	lead di(acetate)	301-04-2
151	trixylyl phosphate	25155-23-1
152	cadmium chloride	10108-64-2
153	1,2-benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4
154	sodium peroxometaborate / sodium perborate	7632-04-4
155	sodium perborate; perboric acid, sodium salt sodium perborate; perboric acid, sodium salt	15120-21-5 11138-47-9
156	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1
157	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7

	Substance	CAS No.
158	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1
159	cadmium fluoride	7790-79-6
160	cadmium sulphate cadmium sulphate	10124-36-4 31119-53-6
161	Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)	AL55
162	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5) 1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No	68515-51-5 68648-93-1
163	5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual isomers of [1] and [2] or any combination thereof]	AL64
164	1,3-propanesultone	1120-71-4
165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3
167	nitrobenzene	98-95-3
168	perfluorononan-1-oic acid (2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-heptadecafluorononanoic acid and its sodium and ammonium salts	375-95-1 21049-39-8 4149-60-4
169	benzo[a]pyrene	50-32-8
170	4,4'-Propane-2,2-diyldiphenol	80-05-7
171	4-Heptylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]	AL65
172	Nonadecafluorodecanoic acid (PFDA) andits sodium and ammonium salts Nonadecafluorodecanoic acid Sodium nonadecafluorodecanoate Ammonium nonadecafluorodecanoate	 335-76-2 3830-45-3 3108-42-7
173	4-tert-Pentylphenol	80-46-6
174	perfluorohexane-1-sulphonic acid and its salts	AL67
175	1,6,7,8,9,14,15,16,17,17,18,18-dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus"TM) [covering any of its individual anti- and syn-isomers or any combination	13560-89-9
176	benz[a]anthracene	56-55-3
177	cadmium nitrate	10325-94-7
178	cadmium carbonate	513-78-0
179	cadmium hydroxide	21041-95-2
180	chrysene	218-01-9
181	reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) [with ≥0.1% w/w 4-heptylphenol,	AL68
182	benzo[ghi]perylene	191-24-2
183	decamethylcyclopentasiloxane (D5)	541-02-6
184	disodium octaborate	12008-41-2
185	dodecamethylcyclohexasiloxane (D6)	540-97-6

	Substance	CAS No.
186	ethylenediamine	107-15-3
187	lead	7439-92-1
188	octamethylcyclotetrasiloxane (D4)	556-67-2
189	terphenyl hydrogenated	61788-32-7
190	Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride) (TMA)	552-30-7
191	Dicyclohexyl phthalate (DCHP)	84-61-7

Table 10: Prohibition material list of brominated flame retardant

Substance	CAS No.
2-bromobiphenyl	2052-07-5
3-bromobiphenyl	2113-57-7
4-bromobiphenyl	92-66-0
tetrabromobiphenyl	40088-45-7
pentabromobiphenyl	56307-79-0
heptabromobiphenyl	35194-78-6
nonabromo-1,1'-biphenyl	27753-52-2
[1,1'-biphenyl]-ar,ar'-diol, tetrabromo-, polymer with (chloromethyl)oxirane and 4,4'-(1-methylethylidene)bis[phenol,]	68758-75-8
1,1'-biphenyl, 2,2',3,4',5'-pentabromo-	73141-48-7
1,1'-biphenyl, 2,2',3,4,6-pentabromo-	77910-04-4
1,1'-biphenyl, 2,2',3,5',6-pentabromo-	88700-05-4
1,1'-biphenyl, 2,2',4,4',5-pentabromo-	81397-99-1
1,1'-biphenyl, 2,2',4,4',6-pentabromo-	97038-97-6
1,1'-biphenyl, 2,2',4,4'-tetrabromo-	66115-57-9
1,1'-biphenyl, 2,2',4,5,5'-pentabromo-	67888-96-4
1,1'-biphenyl, 2,2',4,5',6-pentabromo-	59080-39-6
1,1'-biphenyl, 2,2',4,5,6'-pentabromo-	80274-92-6
1,1'-biphenyl, 2,2',4,5'-tetrabromo-	60044-24-8
1,1'-biphenyl, 2,2',4,6,6'-pentabromo-	97063-75-7
1,1'-biphenyl, 2,2',4,6'-tetrabromo-	97038-95-4
1,1'-biphenyl, 2,2',5,5'-tetrabromo-	59080-37-4
1,1'-biphenyl, 2,2',5,6'-tetrabromo-	60044-25-9
2,2',5-tribromobiphenyl / 1,1'-biphenyl, 2,2',5-tribromo-	59080-34-1
1,1'-biphenyl, 2,2',6,6'-tetrabromo-	97038-96-5
1,1'-biphenyl, 2,2'-dibromo-	13029-09-9
1,1'-biphenyl, 2,3,4,4',5-pentabromo-	96551-70-1
1,1'-biphenyl, 2',3,4,4',5-pentabromo-	74114-77-5
1,1'-biphenyl, 2,3',4,4'-tetrabromo-	84303-45-7
1,1'-biphenyl, 2,3,4,5,6-pentabromo-	38421-62-4
1,1'-biphenyl, 2,3',4',5-tetrabromo-	59080-38-5
1,1'-biphenyl, 2,3',5-tribromo-	59080-35-2
1,1'-biphenyl, 2,3'-dibromo-	49602-90-6
1,1'-biphenyl, 2,4,4',6-tetrabromo-	64258-02-2
1,1'-biphenyl, 2,4',5-tribromo-	59080-36-3
1,1'-biphenyl, 2,4,6-tribromo-	59080-33-0
1,1'-biphenyl, 2,4',6-tribromo-	64258-03-3
1,1'-biphenyl, 2,4'-dibromo-	49602-91-7
1,1'-biphenyl, 2,4-dibromo-	53592-10-2
1,1'-biphenyl, 2,5-dibromo-	57422-77-2
1,1'-biphenyl, 2,6-dibromo-	59080-32-9
1,1'-biphenyl, 3,3',4,4'-tetrabromo-	77102-82-0

Substance	CAS No.
1,1'-biphenyl, 3,3',4,5'-tetrabromo-	97038-98-7
1,1'-biphenyl, 3,3',5,5'-tetrabromo-	16400-50-3
1,1'-biphenyl, 3,3'-dibromo-	16400-51-4
1,1'-biphenyl, 3,4,4',5-tetrabromo-	59589-92-3
1,1'-biphenyl, 3,4'-dibromo-	57186-90-0
1,1'-biphenyl, 3,4-dibromo-	60108-72-7
4,4'-dibromobiphenyl / 1,1'-biphenyl, 4,4'-dibromo-	92-86-4
2,2',3,3',5,5',6,6'-octabromo-4-phenoxy-1,1'-biphenyl	83929-69-5
4,4',6,6'-tetrabromo[1,1'-biphenyl]-2,2'-diol	14957-65-4
decabromobiphenyl（perbromobiphenyl）	13654-09-6
hexabrominated biphenyls / firemaster BP-6	59536-65-1
hexabromobiphenyl	59080-40-9
firemaster FF 1	67774-32-7
hexabromobiphenyl	36355-01-8
octabromobiphenyl	27858-07-7
octabromobiphenyl / bromkal 80	61288-13-9
PBB	AL18
monobrominated diphenyl ethers	101-55-3
dibrominated diphenyl ethers	2050-47-7
tribrominated diphenyl ethers	49690-94-0
pentabromo(tetrabromophenoxy)benzene	63936-56-1
decabrominated diphenyl ethers / decabromodiphenyl ether ('deca'; decabromodiphenyl oxide)	1163-19-5
octabrominated diphenyl ethers / octabromodiphenyl ether ('octa')	32536-52-0
pentabrominated diphenyl ethers / pentabromodiphenyl ether ('penta')	32534-81-9
hexabrominated diphenyl ethers / hexabromodiphenyl ether	36483-60-0
heptabromodiphenylether	68928-80-3
tetrabrominated diphenyl ethers / tetrabromodiphenylether	40088-47-9
PBDE	AL19
hexabromocyclododecane(HBCDD)	25637-99-4
hexabromocyclododecane(HBCDD)	3194-55-6
hexabromocyclododecane(HBCDD)	4736-49-6
hexabromocyclododecane(HBCDD)	65701-47-5
hexabromocyclododecane(HBCDD)	134237-50-6
hexabromocyclododecane(HBCDD)	134237-51-7
hexabromocyclododecane(HBCDD)	134237-52-8
hexabromocyclododecane(HBCDD)	138257-17-7
hexabromocyclododecane(HBCDD)	138257-18-8
hexabromocyclododecane(HBCDD)	138257-19-9
hexabromocyclododecane(HBCDD)	169102-57-2
hexabromocyclododecane(HBCDD)	678970-15-5
hexabromocyclododecane(HBCDD)	678970-16-6
hexabromocyclododecane(HBCDD)	678970-17-7

Table 11: Prohibition material list of phosphorus flame retardant

Substance	CAS No.	contains chlorine (X)
aromatic phosphoric acid esters		
triphenyl phosphate	115-86-6	
diphenyl tolyl phosphate	26444-49-5	
tritolyl phosphate	1330-78-5	
tris(dimethylphenyl) phosphate	25155-23-1	
phenol, t-buthylated, phosphate	mixture	
phenol, isopropylated, phosphate (3:1)	68937-41-7	
2-ethylhexan-1-yl diphenyl phosphate	1241-94-7	
aromatic condensation phosphoric acid esters		
tetraphenyl m-phenylene bis(phosphate)	57583-54-7	
phosphoric trichloride, polymer with 1,3-benzenediol, phenyl ester	125997-21-9	
phosphoric acid, 1,3-phenylene tetrakis(2,6-dimethylphenyl) ester	139189-30-3	
bisphenol A bis(diphenyl phosphate)	5945-33-5	
reaction products of phosphoric trichloride, bisphenol A and phenol	181028-79-5	
halogen-containing phosphoric acid esters		
2-propanol, 1,3-dichloro-, phosphate (3:1)	13674-87-8	X
2-propanol, 1-chloro-, phosphate (3:1)	13674-84-5	X
tris(2-chloroethyl) phosphate	115-96-8	X
halogen-containing condensation phosphoric acid esters		
phosphoric acid, 2,2-bis(chloromethyl)-1,3-propanediyl tetrakis(2-chloroethyl)	38051-10-4	X
poly[oxy[(2-chloro-1-methylethoxy)phosphinylidene]oxy-1,2-ethandiyloxy-1,2-ethandiyl], alpha-(2-chloro-1-methylethyl)-OMEGA-[[bis(2-chloro-1-methylethoxy)phosphinyl]oxy]	184530-92-5	X

Table12 : HFC in Montreal Protocol Kigali

Substance		CAS No.
1,1,1,2-tetrafluoroethane	HFC-134	811-97-2
1,1,1,2-tetrafluoroethane	HFC-134a	811-97-2
ethane, 1,1,1-trifluoro-	HFC-143	420-46-2
propane, 1,1,1,3,3,3-hexafluoro-	HFC-236fa	690-39-1
butane, 1,1,1,3,3-pentafluoro-	HFC-365mfc	406-58-6
propane, 1,1,1,2,3,3,3-heptafluoro-	HFC-227ea HFC-227 R227	431-89-0
1,1,1,2,2,3-hexafluoropropane	FC-236cb	677-56-5
1,1,1,2,3,3-hexafluoropropane	HFC-236ea	431-63-0
propane, 1,1,1,3,3,3-hexafluoro-	HFC-236fa	690-39-1
1,1,2,2,3-pentafluoropropane	HFC-245ca	679-86-7
difluoromethane	HFC-32	75-10-5
ethane, pentafluoro-	HFC-125	354-33-6
ethane, 1,1,1-trifluoro-	HFC-143a	420-46-2
fluoromethane	HFC-41	593-53-3
1,1-difluoroethane	HFC-152	75-37-6
1,1-difluoroethane	HFC-152a	75-37-6
trifluoromethane	HFC-23	75-46-7

Appendix 5: Analytical Method

1. Analysis of cadmium in plastics

Pretreatment method	Plastic is decomposed and liquefied using either one of the following methods in (1) to (3). (1) Wet decomposition using nitric acid, sulfuric acid, hydrogen peroxide, fluorine, and hydrochloric acid (for example, EN1122-2001 “Plastic- Determination of cadmium – Wet decomposition method, or IEC 62321:2008, EPA 3052:1996), (2) Pressure decomposition in sealed container using nitric acid, sulfuric acid, hydrogen peroxide, fluorine, and hydrochloric acid (microwave decomposition method, (3) After ashing under presence of sulfuric acid, acid is dissolved. If residues remain when methods (1) to (3) are used, they shall be liquefied by using any method.
Measuring method	When induced plasma emission spectral analyzer (ICP-AES、ICP-OES) or induced plasma mass analyzer (ICP-MS) or atomic absorption spectrophotometer (AAS) is used, lower limit of quantification in either case. Cadmium of less than 5 ppm must be guaranteed.
Allowable concentration	Cadmium : less than 5 ppm

2. Analysis of lead in plastics

Pretreatment method	Plastic is decomposed and liquefied using either one of the following methods in (1) to (3). (It is preferable that analysis is performed without using sulfuric acid whenever possible. For example, IEC62321:2008, EPA 3052:1996) (1) Wet decomposition using nitric acid, sulfuric acid, hydrogen peroxide, fluorine, and hydrochloric acid (for example, “Plastic- Determination of cadmium – Wet decomposition method), (2) Pressure decomposition in sealed container using nitric acid, sulfuric acid, hydrogen peroxide, fluorine, and hydrochloric acid (microwave decomposition method, (3) After ashing under presence of sulfuric acid, acid is dissolved. If residues remain when methods (1) to (3) are used, they shall be liquefied by using any method.
Measuring method	When induced plasma emission spectral analyzer (ICP-AES、ICP-OES) or induced plasma mass analyzer (ICP-MS) or atomic absorption spectrophotometer (AAS) is used, lower limit of quantification in either case. Lead of less than 30 ppm must be guaranteed.
Allowable concentration	Lead: less than 100 ppm

3. Analysis of packaging materials (cadmium, lead, hexavalent chromium and mercury)

Pretreatment method (other than mercury)	Sample is decomposed and liquefied using either one of the following methods in (1) to (3). (For example, IEC62321:2008, EPA 3052:1996) (1) Wet decomposition using nitric acid, sulfuric acid, hydrogen peroxide, fluorine, and hydrochloric acid (for example, EN1122-2001 “Plastic- Determination of cadmium – Wet decomposition method), (2) Pressure decomposition in sealed container using nitric acid, sulfuric acid, hydrogen peroxide, fluorine, and hydrochloric acid (microwave decomposition method, (3) After ashing under presence of sulfuric acid, acid is dissolved. If residues remain when methods (1) to (3) are used, they shall be liquefied by using any method.
Measuring method (other than mercury)	When induced plasma emission spectral analyzer (ICP-AES、ICP-OES) or induced plasma mass analyzer (ICP-MS) or atomic absorption spectrophotometer (AAS) is used, lower limit of quantification in either case. Cadmium of less than 5 ppm, chromium of less than 2 ppm, and lead of less than 30 ppm must be guaranteed.

Pretreatment method (mercury)	Sample is decomposed and liquefied using either one of the following methods in (1) or (2). (1) Wet decomposition using nitric acid, sulfuric acid, hydrogen peroxide, fluorine, and hydrochloric acid, or (2) Pressure decomposition in sealed container using nitric acid, sulfuric acid, hydrogen peroxide, fluorine, and hydrochloric acid (microwave decomposition method. If residues remain when method (1) or (2) is used, they shall be liquefied by using any method.
Measuring method (mercury)	When exclusive mercury analyzer (atomic absorption for producing atomic vapor by reduction (reduction vaporization AAS), and atomic absorption for producing atomic vapor by heating (heating vaporization AAS), however, in case of atomic absorption for producing atomic vapor by heating, pretreatment of the above liquefaction is unnecessary), induced plasma emission spectral analyzer (ICP-AES、ICP-OES) or induced plasma mass analyzer (ICP-MS) or atomic absorption spectrophotometer (AAS) is used, lower limit of quantification in either case. Confirmation is made if total of cadmium, lead, hexavalent chromium and mercury is less than 5 ppm.
Allowable concentration	If total of four elements exceeds 100 ppm, confirmation is made in reference to component tables or any other data whether the product contains hexavalent chromium. Confirmation is made if total of cadmium, lead, hexavalent chromium and mercury is 100 ppm or less.
Pretreatment method (hexavalent chromium)	Extraction methods such as boiling water extraction and alkaline extraction （For example, IEC 62321:2008 Annex C、EPA 3060A）
Measuring method (hexavalent chromium)	Ultraviolet-Visible(UV/VIS) Spectroscopy Hexavalent chromium of less than 5 ppm must be guaranteed.
Remarks	Chromium shall be analyzed as total chromium amount.

Appendix 6-1 Collective Registration Tool (For Electric)

Input Sheet

Operating

Creation Date		
Company Code		
Supplier	Company Name	
	Sector Name	
	Person in Charge	
	TEL	
	E-Mail	

For electric

Basic Product Information													Structure Parts Information			Chemical Substance Inclusion Data					Customer Information			
Division/ Factory Name (Mandatory)	Sector Name	Person in Charge	TEL	E-mail	Product No. (Mandatory)	Product Name (Mandatory)	Series Name	Category2 (Mandatory)	Product Mass (Mandatory)	Unit (Mandatory)	Ozone Layer Depleting Substance (Mandatory)	Memo	Parts/Material Name (Mandatory)	Mass (Mandatory)	Unit (Mandatory)	CAS No. (Mandatory)	Substance Name (Mandatory)	Content Amount /Rate (Mandatory)	Unit (Mandatory)	Purpose of Inclusion (Mandatory)	Company Name (ALPS) (Mandatory)	ALPS Site Name (Mandatory)	ALPS Parts No. (Mandatory)	ALPS Product Name

Appendix 6-2 Collective Registration Tool (For Automotive)

Input Sheet

Operating

Creation Date		
Company Code		
Supplier	Company Name	
	Sector Name	
	Person in Charge	
	TEL	
	E-Mail	

For automotive

Basic Product Information													Structure Parts Information			Chemical Substance Inclusion Data					Customer Information			
Division/ Factory Name (Mandatory)	Sector Name	Person in Charge	TEL	E-mail	Product No. (Mandatory)	Product Name (Mandatory)	Series Name	Category2 (Mandatory)	Product Mass (Mandatory)	Unit (Mandatory)	Ozone Layer Depleting Substance (Mandatory)	Memo	Parts/Material Name (Mandatory)	Mass (Mandatory)	Unit (Mandatory)	CAS No. (Mandatory)	Substance Name (Mandatory)	Content Amount /Rate (Mandatory)	Unit (Mandatory)	Purpose of Inclusion (Mandatory)	Company Name (ALPS) (Mandatory)	ALPS Site Name (Mandatory)	ALPS Parts No. (Mandatory)	ALPS Product Name

Appendix 7 : Environmentally Hazardous Substance Inclusion Report (serving also as guarantee on non-use of substances prohibited of use)

Here, the image of the "Environmentally Hazardous Substance Inclusion Report (serving also as guarantee on non-use of substances prohibited of use)" is published.

Environmentally Hazardous Substance Inclusion Report (serving also as guarantee on non-use of substances prohibited of use)

Abbreviation: Inclusion report

Date of submittal:
Day Month Year

Company Code

Image

Company seal

Company name

Responsible person

TEL

FAX

EMAIL

Prohibit
ozone de
compou
compou
, berylliu
, polychl
poly chl
related s

For deta

The products delivered as described in the table below contain the environmentally hazardous substances among those specified by Alps Electric Company.
The environmentally hazardous substances not stated herein are not contained.
It is guaranteed that prohibited substances described below are not contained.

ALPS parts number	Supplier product number	Supplier product name	Product mass (g)	Parts/Material Name	Parts mass (g)	Package insert number

Appendix 8: Reasons for Regulating the Environmentally Hazardous Substances

(applicable laws and effects on human bodies)

Regulations, standards etc.		revice date
Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc	Japan	2011/Apr/1
Industrial Safety and Health Act	Japan	2007/Sep/7
Poisonous and Deleterious Substances Control Law	Japan	2007/Aug/15
Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof	Japan	2010/Apri/1
Act on the Protection of the Ozone Layer Through the Control of Specified Substances and Other Measures	Japan	2011/Dec/Sep
Act on Special Measures against Dioxins	Japan	2011/Aug/30
Offensive Odor Control Act	Japan	2011/Dec/14
Act on Control of Household Products Containing Harmful Substances	Japan	2009/Jun/5
Act on Prevention of Marine Pollution and Maritime Disaster	Japan	2010/May/28
Water Pollution Control Act	Japan	2011/Aug/30
Law for Ensuring the Quality, Efficacy, and Safety of Drugs and Medical Devices	Japan	2016/Feb/28
Air Pollution Control Act	Japan	2011/Aug/30
Agricultural Land Soil Pollution Prevention Act	Japan	2011/Aug/30
Act on Promotion of Global Warming Countermeasures	Japan	2011/Jun/24
Act on the Rational Use of Energy	Japan	2011/Jun/24
Narcotics and Psychotropic Control Act	Japan	2006/Jun/14
Waste Management and Public Cleansing Act	Japan	2011/Aug/30
Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)	EU	2018/May/18
Directive 2011/37/EC of the European Parliament and of the Council of 30 March 2011 on End-Of Life Vehicles (ELV)	EU	2011/37/EC
REGULATION (EC) No 1336/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 amending R	EU	ECNo 286/2011
REACH Annex XVII [except: CLP Annex VI Table 3.2 CMR-cat 1,2]	EU	ECNo 494/2011
Candidate List of Substances of Very High Concern for Authorisation ECHA : EUROPEAN CHEMICAL AGENCY Helsinki, 19 December 2011	EU	2018/June/27
Restrictions of marketing and use of certain chemicals 76/769/EEC (7/26/1976)	EU	2011/Jun/20

Regulations, standards etc.		revice date
Council Directive of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labeling of dangerous substances (67/548/EEC)	EU	COMMISSION DIRECTIVE 2009/2/EC
Directive 94/62/EC of 20 December 1994 on packaging and packaging waste	EU	COMMISSION DECISION of 8 May 2006 2006/340/EC
DIRECTIVE 2009/48/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 June 2009 on the safety of toys	EU	DIRECTIVE 2009/48/EC 2009/Jun/30
ESIS PBT [Fulfilled] European chemical Substances Information System	EU	2008/Oct/28
Consumer Goods Ordinance (4/1997)	Germany	2004/Dec
Regulation on restrictions on the use of health and environmentally hazardous chemicals and other products (Product Regulations) http://www.lovdata.no/cgi-wift/ldles?xdoc=/for/ff-20130527-0550.html	Norway	2013/May/27
TSCA Asbestos 40 CFR Part 763 (1976)	US	1997/Aug/25
TSCA Significant New Uses of Chemical Substances (SNURs) 40CFR Part 721(1976)	US	1997/Aug/25
TSCA: Chemical Imports and Export 40 C.F.R. §707	US	1997/Aug/25
TSCA: Reporting and Recordkeeping Requirement 40 C.F.R. §704	US	1997/Aug/25
TSCA: Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions 40 C.F.R. Part 761. (1979)	US	1997/Aug/25
TSCA: Water Treatment Chemicals: Hexavalent Chromium-based Water Treatment Chemicals in Cooling Systems 40 C.F.R. §749.68	US	1997/Aug/25
Proposition65 (1986) [California State, USA]	US	2013/Sep/13
Prohibition of Certain Toxic Substances Regulations, 2005 (2/15/2005)	Canada	2005/2/15
Perfluorooctane Sulfate and its Salts and Certain Other Compounds Regulations [Federal]	Canada	2008/5/29
Prohibition of Certain Toxic Substances Regulations, 2012	Canada	2012/Dec/13
Stockholm Convention on Persistent Organic Pollutants (POPs) Annex I	global treaty	2013/October
Montreal Protocol on Substances that Deplete the Ozone Layer (ODS)	global treaty	1999/Nov/15
International Agency for Research on Cancer（IARC）	global treaty	2004/Dec

Regulations, standards etc.		revice date
GADSL : Global Automotive Declarable Substance List）	Industry standard	GADSL 2017 Version 1.0 （2018/02/01）
IEC62474	Industry standard	2018/April/5
IEC62321:2008	Industry standard	2013/Jun

Appendix 9: Detailed List of Environmentally Hazardous Substances

Number beginning with alphabet in CAS No. column is a code number rather than CAS No.

SubstanceGroup No./CAS No. etc	Substance Name
1	**ozone depleting substances**
431-87-8	2-chloro-1,1,1,3,3,3-hexafluoropropane (HCFC-226da)
HSC261016	tetrabromofluoroethane
HSC261017	tribromodifluoroethane
124-72-1	2-bromo-1,1,1,2-tetrafluoroethane (HBFC-124 B1)
HSC261021	tribromofluoroethane
HSC261039	hexabromofluoropropane
HSC261040	pentabromodifluoropropane
HSC261015	tetrabromotrifluoropropane
HSC261019	tribromotetrafluoropropane
666-48-8	C3HF4Br3
431-78-7	dibromopentafluoropropane (HBFC-225 B2)
HSC261041	pentabromofluoropropane
HSC261020	tribromotrifluoropropane
HSC261006	dibromotetrafluoropropane
HSC261038	bromopentafluoropropane
HSC261013	tetrabromofluoropropane
148875-95-0	propane, 1,1,1,3-tetrabromo-3-fluoro-
HSC261018	tribromodifluoropropane
HSC261028	bromotetrafluoropropane
19041-01-1 29151-25-5 679-84-5 460-67-3	C3H3F4Br C3H3F4Br C3H3F4Br C3H3F4Br
HSC261022	tribromofluoropropane
75372-14-4	C3H4FBr3
HSC261031	bromotrifluoropropane
HSC261011	dibromofluoropropane
HSC261027	bromodifluoropropane
421-46-5	bromotrifluoropropane
74-83-9	bromomethane
74-96-4	ethane, bromo-
2314-97-8	trifluoroiodomethane
74-87-3	methyl chloride
373-52-4	bromo(fluoro)methane
79-38-9	ethene, chlorotrifluoro-
74-97-5	bromo(chloro)methane
56-23-5	tetrachloromethane
75-63-8	bromo(trifluoro)methane
71-55-6	1,1,1-trichloroethane
75-69-4	trichloro(fluoro)methane
75-72-9	chloro(trifluoro)methane
75-71-8	dichloro(difluoro)methane
354-56-3	1,1,1,2,2-pentachloro-2-fluoroethane
76-13-1	1,1,2-trichloro-1,2,2-trifluoroethane
354-58-5	1,1,1-trichloro-2,2,2-trifluoroethane
422-78-6	CFC-211
422-81-1	1,1,1,2,3,3,3-heptachloro-2-fluoropropane(CFC-211ba)
1320-37-2	dichloro(tetrafluoro)ethane
3182-26-1	1,1,1,3,3,3-hexachloro-2,2-difluoropropane
134452-44-1	hexachlorodifluoropropane

SubstanceGroup No./CAS No. etc	Substance Name
353-59-3	bromo(chloro)(difluoro)methane
76-18-6	2-chloro-1,1,1,2,3,3,3-heptafluoropropane
422-86-6	1-chloro-1,1,2,2,3,3,3-heptafluoropropane
76-15-3	1-chloro-1,1,2,2,2-pentafluoroethane
134237-31-3	pentachloro(trifluoro)propane
2354-06-5	CFC-213
124-73-2	1,2-dibromo-1,1,2,2-tetrafluoroethane
76-12-0	1,1,2,2-tetrachloro-1,2-difluoroethane
1599-41-3	1,2,2-trichloro-1,1,3,3,3-pentafluoropropane
76-17-5	1,2,3-trichloro-1,1,2,3,3-pentafluoropropane
4259-43-2	データなし （1,1,1-trichloropentafluoropropane）
661-97-2	1,2-dichloro-1,1,2,3,3,3-hexafluoropropane
135401-87-5	propane, heptachlorofluoro-
374-07-2	1,1-dichlor-1,2,2,2-tetrafluoroethane
76-14-2	1,2-dichloro-1,1,2,2-tetrafluoroethane
26523-64-8	trichloro(trifluoro)ethane
67-72-1	perchloroethane
76-11-9	1,1,1,2-tetrachlor-2,2-difluoroethane
76-12-0	1,1,1,2-tetrachlor-2,2-difluoroethane
2268-46-4	1,1,1,3-tetrachloro-2,2,3,3-tetrafluoropropane
29255-31-0	tetrachloro(tetrafluoro)propane
354-48-3	1,1,1-tribromo-2,2,2-trifluoroethane
27336-23-8	1,1-dibromo-1,2,2,2-tetrafluoroethane
430-85-3	1,1-dibromo-2,2-difluoroethylene
13749-38-7	1,2-dibromo-1,1,2-trichloroethane
354-51-8	1,2-dibromo-1-chloro-1,2,2-trifluoroethane
630-25-1	1,2-dibromotetrachloroethane
758-24-7	1-bromo-1-chloro-2,2-difluoroethylene
5870-61-1	2-bromo-1,1-dichloroethylene
353-58-2	bromodichlorofluoromethane
354-55-2	bromopentafluoroethane
598-73-2	bromotrifluoroethylene
558-13-4	tetrabromomethane
74925-63-6	ethane, bromochlorotrifluoro-
124-48-1	dibromochloromethane
594-18-3	dibromodichloromethane
25497-30-7	dibromo(tetrafluoro)ethane
354-06-3	1-bromo-2-chloro-1,1,2-trifluoroethane
354-20-1	ethane, 2-bromo-1-chloro-1,1,2-trifluoro-
51230-17-2	ethane, 2-bromo-2-chloro-1,1,1-trifluoro-, (2R)-
51230-18-3	ethane, 2-bromo-2-chloro-1,1,1-trifluoro-, (2S)-
598-16-3	tribromoethylene
79-28-7	tetrabromoethylene
75-62-7	bromotrichloromethane
353-54-8	tribromofluoromethane
75-95-6	pentabromoethane
594-15-0	tribromochloromethane
75-61-6	dibromodifluoromethane
75-82-1	1,2-dibromo-1,1-difluoroethane
1868-53-7	dibromo(fluoro)methane
359-19-3	C2H2F2Br2: 1,1-dibromo-2,2-difluoroethane
1511-62-2	bromo(difluoro)methane
762-49-2	1-bromo-2-fluoroethane
352-91-0	1-bromo-3-fluoropropane
460-32-2	3-bromo-1,1,1-trifluoropropane

SubstanceGroup No./CAS No. etc	Substance Name
358-97-4	1,2-dibromo-1-fluoroethane
460-25-3	dibromodifluoropropane / 1,3-dibromo-1,1-difluoropropane
354-04-1	1,2-dibromo-1,1,2-trifluoroethane
431-21-0	dibromotrifluoropropane / 2,3-dibromo-1,1,1-trifluoropropane
353-93-5	C2HFBr4
306-80-9	ethane, 1,1,2,2-tetrabromo-1-fluoro-
7304-53-2	C2HF2Br3
677-34-9	C2HF2Br3
353-97-9	C2HF2Br3
598-67-4	C2H2FBr3
420-88-2	C2H2FBr3
359-07-9	2-bromo-1,1-difluoroethane
AL01	C3HFBr6
AL01	C3HF2Br5
AL01	C3HF3Br4
AL01	C3H2FBr5
148875-98-3	C3H2F2Br4
421-90-9	1,2,2-tribromo-3,3,3-trifluoropropane
460-86-6	1,3-dibromo-1,1,3,3-tetrafluoropropane
422-01-5	C3H2F5Br
677-52-1	C3H2F5Br
677-53-2	C3H2F5Br
22692-16-6	C3H2F5Br
460-88-8	C3H2F5Br
679-94-7	C3H2F5Br
26391-11-7	C3H2F5Br
53692-43-6	C3H2F5Br
53692-44-7	C3H2F5Br
70192-80-2	tribromodifluoropropane(HBFC-242 B3)
666-25-1	1,2,3-tribromo-3,3-difluoropropane
70192-71-1	C3H3F4Br
70192-84-6	C3H3F4Br
453-00-9	C3H5FBr2
1786-38-5	C3H5FBr2
51584-26-0	C3H5FBr2
62135-10-8	C3H5FBr2
62135-11-9	C3H5FBr2
111483-20-6	C3H5F2Br
430-87-5	C3H5F2Br
420-89-3	C3H5F2Br
420-98-4	C3H5F2Br
2195-05-3	C3H5F2Br
461-49-4	C3H5F2Br
420-47-3	bromodifluoroethane / 1-bromo-1,1-difluoroethane
2252-78-0	1-bromo-1,1,2,3,3,3-hexafluoropropane
421-06-7	2-bromo-1,1,1-trifluoroethane
359-08-0	2-bromo-1,1-difluoroethylene
1871-72-3	bromofluoropropane / propane, 1-bromo-2-fluoro-
812-04-4	1,1-dichloro-1,2,2-trifluoroethane (HCFC-123b)
354-21-2	1,2,2-trichloro-1,1-difluoroethane
354-23-4	1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a)
90454-18-5	dichloro-1,1,2-trifluoroethane
1649-08-7	1,2-dichloro-1,1-difluoroethane (HCFC 132b)
431-06-1	1,2-dichloro-1,2-difluoroethane (HCFC-132)
102738-79-4	2-chloro-1,3-difluoropropane

SubstanceGroup No./CAS No. etc	Substance Name
421-02-03	1-chloro-1,1-difluoropropane
421-02-3	1-chloro-1,1-difluoropropane(HCFC-262fc)
111512-56-2	1,1-dichloro-1,2,3,3,3-pentafluoropropane
127564-82-3	tetrachloro(difluoro)propane
127564-90-3	trichloro(difluoro)propane（HCFC-242）
127564-91-4	trichloro(tetrafluoro)propane
128903-21-9	2,2-dichloro-1,1,1,3,3-pentafluoropropane
1330-45-6	chloro(trifluoro)ethane (HCFC-133)
134190-49-1	tetrachloro(fluoro)propane (HCFC-241)
666-27-3	1,1,2,3-tetrachloro-1-fluoropropane(HCFC-241db)
134190-51-5	trichloro(fluoro)propane (HCFC-251)
134237-32-4	1,1,2,2-tetrachloro-1-fluoroethane
134237-34-6	1,1,2-trichloro-2-fluoroethane
134237-35-7	hexachloro(fluoro)propane
134237-36-8	pentachloro(difluoro)propane (HCFC-222)
134237-37-9	1,1,3,3-tetrachloro-1,2,2-trifluoropropane (HCFC-223)
134237-38-0	1,3,3-trichloro-1,1,2,2-tetrafluoropropane (HCFC-224)
134237-39-1	tetrachloro(difluoro)propane (HCFC-232)
134237-40-4	trichloro(trifluoro)propane (HCFC-233)
134237-41-5	chloro(pentafluoro)propane (HCFC-235)
134237-42-6	trichloro(difluoro)propane（HCFC-242）
134237-43-7	dichloro(trifluoro)propane (HCFC-243)
134237-44-8	chloro(trifluoro)propane (HCFC-253)
134237-45-9	dichloro(fluoro)propane (HCFC-261)
13474-88-9	1,1-dichloro-1,2,2,3,3-pentafluoropropane (HCFC-225)
136013-79-1	1,3-dichloro-1,1,2,3,3-pentafluoropropane
1842-05-3	1,1-dichloro-1,2-difluoroethane
25167-88-8	dichloro(fluoro)ethane
25915-78-0	dichloro(difluoro)ethane
29470-94-8	hexachlorofluoropropane
29470-95-9	tetrachlorotrifluoropropane
338-75-0	2,3-dichloro-1,1,1-trifluoropropane
41834-16-6	trichloro(difluoro)ethane (HCFC-122)
420-44-0	2-chloro-2-fluoropropane(HCFC-271ba)
430-55-7	1-chloro-1-fluoropropane(HCFC-271fb)
422-44-6	1,2-dichloro-1,1,2,3,3-pentafluoropropane
127564-92-5	dichloro(pentafluoro)propane (HCFC-225)
422-48-0	2,3-dichloro-1,1,1,2,3-pentafluoropropane
422-56-0	3,3-dichloro-1,1,1,2,2-pentafluoropropane
431-86-7	1,2-dichloro-1,1,3,3,3-pentafluoropropane
460-35-5	3-chloro-1,1,1-trifluoropropane
460-69-5	Ozone Depleting Substances (CFC, Halon, HBFC, HCFC & others)
460-92-4	1-chloro-1,1,3,3,3-pentafluoropropane
507-55-1	1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb)
61623-04-9	trichlorotrifluoropropane
679-85-6	3-chloro-1,1,2,2-tetrafluoropropane(HCFC-244ca)
7125-83-9	1,1,1-trichloro-3,3,3-trifluoropropane(HCFC-233fb)
7125-99-7	1,1-dichloro-1,2,2-trifluoropropane
7799-56-6	1,1-dichloro-1-fluoropropane (HCFC-261fc)
818-99-5	1,1,3-trichloro-1-fluoropropane (HCFC-251fb)
134190-52-6	dichloro(difluoro)propane (HCFC-252)
127404-11-9	dichlorofluropropane （HCFC-261）
127564-83-4	dichloro(tetrafluoro)propane (HCFC-234)
116890-51-8	dichlorotrifluoropropane （HCFC-243）

SubstanceGroup No./CAS No. etc	Substance Name
430-57-9	1,2-dichloro-1-fluoroethane (HCFC-141)
430-58-0	1,2-dichloro-1-fluoroethylene
354-25-6	1-chloro-1,1,2,2-tetrafluoroethane (HCFC-124a)
75-68-3	1-chloro-1,1-difluoroethane (HCFC-142b)
359-04-6	1-chloro-1,2-difluoroethylene
2317-91-1	1-chloro-1-fluoroethene
460-16-2	1-chloro-2-fluoroethylene
359-10-4	2-chloro-1,1-difluoroethylene
25497-29-4	chloro(difluoro)ethane (HCFC-142)
2837-89-0	2-chloro-1,1,1,2-tetrafluoroetahne
75-45-6	chloro(difluoro)methane (HCFC-22)
593-70-4	chloro(fluoro)methane (HCFC-31)
63938-10-3	chloro(tetrafluoro)ethane (HCFC-124)
75-43-4	dichloro(fluoro)methane (HCFC-21)
34077-87-7	dichloro(trifluoro)ethane (HCFC-123)
2366-36-1	1,1,1-trichloro-2-fluoroethane HCFC-131b
811-95-0	1,1,2-trichloro-1-fluoroethane
359-28-4	1,1,2-trichloro-2-fluoroethane
1717-00-6	1,1-dichloro-1-fluoroethane (HCFC-141b)
354-15-4	1,1,2-trichloro-1,2-difluoroethane HCFC-122a
338-64-7	1-chloro-1,2-difluoroethane (HCFC-142a)
306-83-2	2,2-dichloro-1,1,1-trifluoroethane (HCFC-123)
55949-44-5	chloro-1,1-difluoroethane
338-65-8	2-chloro-1,1-difluoroethane (HCFC-142)
27154-33-2	trichloro(fluoro)ethane (HCFC 131)
134190-53-7	chloro(difluoro)propane (HCFC-262)
1615-75-4	1-chloro,1-fluoroethane
110587-14-9	chloro(fluoro)ethane (HCFC-151)
134190-54-8	chloro(fluoro)propane (HCFC-271)
134308-72-8	2-chloro-1,1,1,3,3,3-hexafluoropropane
28987-04-4	chlorohexafluoropropane (HCFC-226)
108662-83-5	chloropentafluoropropane (HCFC-235)
134190-50-4	chloro(tetrafluoro)propane (HCFC-244)
26588-23-8	chlorotrifluoropropane (HCFC-253)
75-88-7	2-chloro-1,1,1-trifluoroethane (HCFC-133a)
116867-32-4	pentachlorodifluoropropane
134190-48-0	pentachloro(fluoro)propane (HCFC-231)
421-04-5	1-chloro-1,1,2-trifluoroethane (HCFC-133b)
431-07-2	1-chloro-1,2,2-trifluoroethane (HCFC-133)
430-53-5	1,1-dichloro-2-fluoroethane
471-43-2	1,1-dichloro-2,2-difluoroethane
354-11-0	1,1,1,2-tetrachloro-2-fluoroethane (HCFC 121a)
354-14-3	1,1,2,2-tetrachloro-1-fluoroethane
422-49-1	1,1,1,3,3-pentachloro-2,2-difluoropropane(HCFC-222ca)
422-30-0	1,2,2,3,3-pentachloro-1,1-difluoropropane(HCFC-222aa)
422-52-6	1,1,3,3-tetrachloro-1,2,2-trifluoropropane(HCFC-223ca)
422-50-4	1,1,1,3-tetrachloro-2,2,3-trifluoropropane(HCFC-223cb)
422-54-8	1,3,3-trichloro-1,1,2,2-tetrafluoropropane (HCFC-224ca)
422-53-7	1,1,3-trichloro-1,1,2,2-tetrafluoropropane(HCFC-224cb)
422-51-5	trichlorotetrafluoropropane
422-51-7	1,1,1-trichloro-2,2,3,3-tetrafluoropropane(HCFC-224cc)
460-89-9	1,1,1,3-tetrachloro-3,3-difluoropropane(HCFC-232fc)
460-63-9	1,3,3-trichloro-1,1-difluoropropane(HCFC-242fa)
422-26-4	1,1,1,2,2,3-hexachloro-3-fluoropropane(HCFC-221ab)
421-75-0	1-chloro-1,1,2,2-tetrafluoropropane(HCFC-244cc)

SubstanceGroup No./CAS No. etc	Substance Name
420-97-3	1,2-dichloro-2-fluoropropane(HCFC-261ba)
421-41-0	1,1,2-trichloro-1-fluoropropane(HCFC-251dc)
819-00-1	1,3-dichloro-1,1-difluoropropane(HCFC-252fb)
425-94-5	1,2-dichloro-1,2,3,3-tetrafluoropropane(HCFC-234db)
354-12-1	1,1,1-trichloro-2,2-difluoroethane(HCFC-122b)
420-99-5	1-chloro-2,2-difluoropropane(HCFC-262ca)
762-50-5	1-chloro-2-fluoroethane (HCFC-151)
421-94-3	1,1,1,2,3-pentachloro-2-fluoro-propane(HCFC-231bb)
2252-84-8	propane, 1,1,1,2,2,3,3-heptafluoro-
624-72-6	ethane, 1,2-difluoro-
25497-28-3	difluoroethane
353-36-6	fluoroethane
1814-88-6	1,1,1,2,2-Pentafluoropropane
27070-61-7	propane, hexafluoro-
27987-06-0	trifluoroethane
AL01	ozon depleting substances
2	**greenhouse substances**
382-21-8	perfluoroisobutylene
307-34-6	perfluorooctane （PFC-71-18）
75-73-0	methane, tetrafluoro-
76-16-4	ethane, hexafluoro- （PFC-1169）
76-19-7	propane, 1,1,1,2,2,3,3,3-octafluoro- (PFC-218)
355-25-9	decafluorobutane (PFC-31-10)
115-25-3	cyclobutane, octafluoro- （PFC-c318）
678-26-2	dodecafluoropentane （PFC-41-12）
335-57-9	perfluoroheptane (PFC-61-16)
355-42-0	tetradecafluorohexane (PFC-51-14)
116-14-3	ethene, tetrafluoro-
AL02	perfluorocarbon greenhous e substances
407-59-0	1,1,1,4,4,4-hexafluorobutane
75-02-5	ethene, fluoro-
677-56-5	HFC-236cb
75-38-7	ethene, 1,1-difluoro-
811-97-2	1,1,1,2-tetrafluoroethane (HFC-134)
359-35-3	1,1,1,2-tetrafluoroethane (HFC-134)
811-97-2	1,1,1,2-tetrafluoroethane (HFC-134a)
420-46-2	ethane, 1,1,1-trifluoro- (HFC-143)
430-66-0	1,1,2-trifluoroethane (HFC-143)
420-46-2	ethane, 1,1,1-trifluoro- (HFC-143a)
354-33-6	ethane, pentafluoro- (HFC-125)
75-37-6	1,1-difluoroethane (HFC-152)
75-37-6	1,1-difluoroethane (HFC-152a)
431-89-0	propane, 1,1,1,2,3,3,3-heptafluoro- (HFC-227ea, HFC-227, R227)
75-46-7	trifluoromethane (HFC-23)
677-56-5	1,1,1,2,2,3-hexafluoropropane (FC-236cb)
431-63-0	1,1,1,2,3,3-hexafluoropropane (HFC-236ea)
690-39-1	propane, 1,1,1,3,3,3-hexafluoro- (HFC-236fa)
679-86-7	1,1,2,2,3-pentafluoropropane (HFC-245ca)
460-73-1	1,1,1,3,3-pentafluoropropane (HFC-245fa)
75-10-5	difluoromethane (HFC-32)
406-58-6	butane, 1,1,1,3,3-pentafluoro- (HFC-365mfc)
593-53-3	fluoromethane (HFC-41)
138495-42-8	pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro- (HFC-43-10mee)
AL03	hydrofluorocarbon greenhouse substances

SubstanceGroup No./CAS No. etc	Substance Name
2551-62-4	sulfur hexafuoride (SF6)
7783-54-2	nitrogen trifluoride
3	**chloroform**
67-66-3	chloroform
4	**glycol ether and its acetates**
109-86-4	2-methoxyethanol
1589-47-5	1-propanol, 2-methoxy-
110-71-4	1,2-dimethoxyethane
110-80-5	2-ethoxyethanol
110-49-6	2-methoxyethyl acetate
111-15-9	2-ethoxyethyl acetate
111-96-6	1-methoxy-2-(2-methoxyethoxy)ethane
111-77-3	2-(2-methoxyethoxy)ethanol
111-76-2	2-butoxyethanol
112-07-2	2-butoxyethyl acetate
107-98-2	2-propanol, 1-methoxy-
108-65-6	2-propyl, 1-methoxy-, acetate
1569-02-4	2-propanol, 1-ethoxy-
98516-30-4	propanol, 1(or 2)-ethoxy-, acetate
AL05	glycol ether and its acetate
5	**organic brominated solvents**
106-94-5	1-bromopropane
75-26-3	2-bromopropane
AL51	organic brominated solvent
6	**benzene**
71-43-2	benzen
7	**aldehyde compounds**
50-00-0	formaldehyde
75-07-0	acetaldehyde
8	**chlorinated solvents**
107-06-2	1,2-dichloroethane
156-59-2	cis-dichloroethylene
156-60-5	ethylene, 1,2-dichloro-, (1E)-
542-75-6	1,3-dichloroprop-1-ene
75-09-2	dichloromethane
79-01-6	1,1,2-trichloroethene
87-68-3	perchlorobuta-1,3-diene
58-89-9	r-1,c-2,t-3,c-4,c-5,t-6-Hexachlorocyclohexane
608-93-5	1,2,3,4,5-pentachlorobenzene
87-86-5	2,3,4,5,6-pentachlorophenol
7778-73-6	potassium pentachlorophenate
131-52-2	sodium pentachlorophenate
2917-32-0	zinc bis(pentachlorophenolate)
634-66-2	1,2,3,4-tetrachlorobenzene
634-90-2	1,2,3,5- tetrachlorobenzene
12408-10-5	tetrachlorobenzene
95-94-3	1,2,4,5- tetrachlorobenzene
542-88-1	oxybis[chloromethane]
95-95-4	2,4,5 -trichlorophenol,
88-06-2	2,4,6 -trichlorophenol,
96-18-4	1,2,3-trichloropropane
71-55-6	1,1,1-trichloroethane
630-20-6	1,1,1,2 tetrachloroethane
79-00-5	1,1,2 trichloroethane
56-23-5	tetrachloromethane

SubstanceGroup No./CAS No. etc	Substance Name
78-87-5	1,2-dichloropropane
AL09	chlorinated solvent
9	**cadmium and its compounds**
592-02-9	diethyl cadmium
506-82-1	dimethylcadmium
35658-65-2	cadmium chloride monohydrate
13477-21-9	cadmium sulfate tetrahydrate
12014-29-8	antimony, compound with cadmium (2:3)
51222-60-7	boric acid, cadmium salt
12656-57-4	cadmium sulfoselenide orange C.I. pigment orange 20
14402-75-6	cadmium dipotassium tetracyanide
7440-43-9	cadmium
543-90-8	cadmium di(acetate)
15743-19-8	cadmium acrylate
12006-15-4	tricadmium diarsenide
2420-98-6	cadmium bis(2-ethylhexanoate)
7789-42-6	cadmium bromide
13464-92-1	cadmium dibromide tetrahydrate
513-78-0	cadmium carbonate
10108-64-2	cadmium(II) chloride
12185-64-7	pentacadmium chloridetriphosphate
100402-53-7	cadmium chloride phosphate (Cd5Cl(PO4)3), manganese-doped
7790-78-5	cadmium chloride, hydrate (2:5)
14312-00-6	cadmium chromate
542-83-6	cadmium cyanide (Cd(CN)2)
14923-81-0	cadmium diicosanoate
7790-83-2	cadmium dinitrite
13832-25-2	cadmium diricinoleate
14486-19-2	cadmium tetrafluoroborate
7790-79-6	cadmium(II) fluoride
17010-21-8	cadmium hexafluorosilicate(2-)
14067-62-0	cadmium hydrogen phosphate
21041-95-2	cadmium hydroxide
7790-81-0	cadmium iodate
7790-80-9	cadmium iodide
29870-72-2	cadmium mercury telluride
13972-68-4	cadmium molybdenum tetroxide
12187-14-3	dicadmium niobate
10022-68-1	cadmium dinitrate tetrahydrate
10325-94-7	cadmium nitrate
1306-19-0	cadmium(Ⅱ) oxide
101356-99-4	cadmium oxide (CdO), solid solution with calcium oxide and titanium oxide (TiO2), praseodymium-D/Ped
102110-30-5	cadmium oxide (CdO), solid solution with magnesium oxide, tungsten oxide (WO3) and zinc oxide
12139-22-9	cadmium peroxide
12014-28-7	tricadmium diphosphide
16986-83-7	cadmium propionate
1306-24-7	cadmium selenide
101357-00-0	Cadmium selenide (CdSe), solid soln. with cadmium sulfide, zinc selenide and zinc sulfide, aluminum and copper-doped
101357-01-1	Cadmium selenide (CdSe), solid soln. with cadmium sulfide, zinc selenide and zinc sulfide, copper and manganese-doped

SubstanceGroup No./CAS No. etc	Substance Name
101357-02-2	Cadmium selenide (CdSe), solid soln. with cadmium sulfide, zinc selenide and zinc sulfide, europium-doped
101357-03-3	Cadmium selenide (CdSe), solid soln. with cadmium sulfide, zinc selenide and zinc sulfide, gold and manganese-doped
101357-04-4	cadmium selenide (CdSe), solid soln. with cadmium sulfide, zinc selenide and zinc sulfide, manganese and silver-doped
12626-36-7	cadmium selenide sulfide (Cd(Se,S))
12214-12-9	dicadmium monoselenide monosulfide
71243-75-9	cadmium selenide (CdSe), solid soln. with cadmium sulfide
12213-70-6	cadmium selenide sulfide, (Cd2SeS)
11112-63-3	cadmium selenide sulphide
2223-93-0	cadmium distearate
141-00-4	cadmium succinate
10124-36-4	cadmium salt of sulfuric acid (1:1)
31119-53-6	cadmium salt of sulfuric acid (1:1)
7790-84-3	[Cadmium(II) sulfate] hydrate (3:8)
1306-23-6	cadmium sulfide
13477-23-1	cadmium sulphite
12292-07-8	cadmium ditantalum hexaoxide
1306-25-8	cadmium telluride
12014-14-1	cadmium titanium trioxide
7790-85-4	cadmium wolframate
16056-72-7	cadmium divanadium hexoxide
11129-14-9	cadmium zinc sulfide
12442-27-2	cadmium zinc sulphide
12139-23-0	cadmium zirconium trioxide
15337-60-7	lauric acid, barium cadmium salt
93820-02-1	carbonic acid, cadmium salt
13701-66-1	diboron tricadmium hexaoxide
13755-33-4	dicadmium hexakis(cyano-C)ferrate(4-)
37131-86-5	diphosphoric acid, barium cadmium salt
19262-93-2	diphosphoric acid, cadmium salt (1:?)
15600-62-1	diphosphoric acid, cadmium salt (1:2)
20648-91-3	dipotassium tetrachlorocadmate(2-)
14520-70-8	phosphoric acid, ammonium cadmium salt (1:1:1)
13847-17-1	phosphoric acid, cadmium salt
13477-17-3	tricadmium bis(phosphate)
13814-62-5	cadmium selenate
13814-59-0	cadmium selenite
13477-19-5	cadmium silicate
14017-36-8	cadmium disulphamate
15851-44-2	cadmium tellurium trioxide
15852-14-9	cadmium tellurium tetraoxide
10196-67-5	cadmium myristate
14239-68-0	cadmium bis(diethyldithiocarbamate)
4464-23-7	cadmium diformate
90604-90-3	cadmium lithopone yellow
58339-34-7	cadmium sulfoselenide red
90604-89-0	cadmium zinc litophone yellow
1345-09-1	cadmium mercury sulfide
8048-07-5	cadmium zink sulfide yellow
93686-40-9	nonanoic acid, branched, cadmium salt
AL10	cadmium compounds
10	**mercury and its compounds**
HSC130112	alkylmercury

SubstanceGroup No./CAS No. etc	Substance Name
33631-63-9	mercuric chloride
55728-51-3	(2',7'-dibromo-3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-4'-yl)hydroxymercury
52795-88-7	(2-carboxy-m-tolyl)hydroxymercury, monosodium salt
14066-61-6	(2-carboxyphenyl)hydroxymercury
109-62-6	(acetato-O)ethylmercury
108-07-6	(acetato-O)methylmercury
3294-58-4	(bromodichloromethyl)phenylmercury
27360-58-3	(dihydroxyphenyl)phenylmercury
18918-06-4	(lactato-O1,O2)mercury
2701-61-3	(maleoyldioxy)bis[phenylmercury]
31224-71-2	(metaborato-O)phenylmercury
2279-64-3	(phenylmercurio)urea
61792-06-1	[(2-hydroxyethyl)amino]phenylmercury acetate
94070-92-5	[mu-[(oxydiethylene but-2-enedioato)(2-)]]diphenyldimercury
93882-20-3	[mu-[[4,4'-(oxydiethylene) bis(dodecenylsuccinato)](2-)]]diphenyldimercury
19367-79-4	[mu-[metasilicato(2-)-O:O]]bis(2-methoxyethyl)dimercury
6273-99-0	[mu-[orthoborato(2-)-O:O']]diphenyldimercury
23319-66-6	[2,2',2"-nitrilotri(ethanol)-N,O,O',O"]phenylmercury lactate
27605-30-7	[2-ethylhexyl hydrogen maleato-O']phenylmercury
5722-59-8	[benzoato(2-)-C2,O1]mercury
31632-68-5	[naphthoato(1-)-O]phenylmercury
148-61-8	2-(ethylmercuriothio)benzoic acid
124-08-3	2-ethoxyethylmercury acetate
124-01-6	2-ethoxyethylmercury chloride
584-18-9	2-hydroxy-5-(1,1,3,3-tetramethylbutyl)phenylmercury acetate
123-88-6	2-methoxyethylmercury chloride
133-58-4	6-methyl-3-nitrobenzoxamercurate
10048-99-4	barium tetraiodomercurate
94276-38-7	bis(5-oxo-DL-prolinato-N1,O2)mercury
94481-62-6	bis(5-oxo-L-prolinato-N1,O2)mercury
84029-43-6	bis(acetato-O)[mu-[1,3-dioxane-2,5-diylbis(methylene)-C:C',O,O']]dimercury
18917-83-4	bis(lactato-O1,O2)mercury
6795-81-9	bis(trichloromethyl)mercury
33724-17-3	bis[(+)-lactato]mercury
13294-23-0	bis[(trimethylsilyl)methyl]mercury
18832-83-2	bromo(2-hydroxypropyl)mercury
107-26-6	bromoethylmercury
506-83-2	bromomethylmercury
1192-89-8	bromophenylmercury
62-37-3	chlormerodrin
1320-80-5	chloro(hydroxyphenyl)mercury
90-03-9	2-chloromercuriophenol
3076-91-3	chloro[p-[(2-hydroxy-1-naphthyl)azo]phenyl]mercury
5857-39-6	chloro-2-thienylmercury
5955-19-1	chloro-m-tolylmercury
2777-37-9	chloro-o-tolylmercury
27685-51-4	mercury(2+) tetrakis(thiocyanato-N)cobaltate(2-)
62638-02-2	mercury hydrogen cyclohexanebutyrate
33445-15-7	diammonium tetrachloromercurate
627-44-1	diethylmercury
102-98-7	dihydrogen [orthoborato(3-)-O]phenylmercurate(2-)
93820-20-3	diiodo(5-iodopyridin-2-amine-N1)mercury
1310-88-9	dimercury amidatenitrate

SubstanceGroup No./CAS No. etc	Substance Name
13967-25-4	dimercury difluoride
15385-57-6	dimercury diiodide
2949-11-3	dimercury(I) oxalate
3810-81-9	dimethyl[mu-[sulphato(2-)-O:O']]dimercury
593-74-8	dimethylmercury
616-99-9	di-o-tolylmercury
27236-65-3	diphenyl[mu-[(tetrapropenyl)succinato(2-)-O:O']]dimercury
587-85-9	diphenylmercury
15682-88-9	disodium tetra(cyano-C)mercurate(2-)
584-43-0	disuccinimidomercury
2440-42-8	ethyliodomercury
107-27-7	ethylmercuric chloride
2235-25-8	tris(ethylmercury) phosphate
3570-80-7	bis(acetato-O)[mu-(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-2',7'-diyl)]dimercury
13170-76-8	mercury bis(2-ethylhexanoate)
14235-86-0	hydrargaphen
64491-92-5	hydrogen [metasilicato(2-)-O](2-methoxyethyl)mercurate(1-)
94277-53-9	hydrogen .mu.-hydroxy[.mu.-[orthoborato(3-)-O:O']]D/Phenyldimercurate(1-)
26552-50-1	Hydrogen [3-[(alpha-carboxylato-o-anisoyl)amino]-2-hydroxypropyl]hydroxymercurate(1-)
143-36-2	iodomethylmercury
122-64-5	lactatophenylmercury
4386-35-0	meralein sodium
21259-76-7	mercaptomerin sodium
525-30-4	mercuderamide
59-85-8	4-chloromercuriobenzoic acid
138-85-2	sodium 4-hydroxymercuriobenzoate
72379-35-2	hydrogen triiodomercurate(1-), compound with 3-methyl-3H-benzothiazol-2-imine (1:1)
20582-71-2	mercurate(2-), tetrachloro-, potassium (1:2), (T-4)-
63325-16-6	diiodobis(5-iodopyridin-2-amine)mercury dihydroiodide
13876-85-2	dicopper tetraiodomercurate
1600-27-7	mercury di(acetate)
7784-37-4	mercury hydrogenarsenate
583-15-3	mercury dibenzoate
7789-47-1	mercury dibromide
7487-94-7	mercury dichloride
592-04-1	mercury dicyanide
7774-29-0	mercury diiodide
10045-94-0	mercury dinitrate
21908-53-2	mercury oxide
1335-31-5	dimercury dicyanide oxide
591-89-9	dipotassium tetracyanomercurate
1312-03-4	trimercury dioxide sulphate
7783-35-9	mercury sulphate
592-85-8	mercury dithiocyanate
498-73-7	mercurobutol
631-60-7	dimercury di(acetate)
38232-63-2	mercury azide
7546-30-7	mercury chloride
7783-30-4	mercury iodide
10415-75-5	dimercury dinitrate
15829-53-5	mercurous oxide

SubstanceGroup No./CAS No. etc	Substance Name
7783-36-0	dimercury sulphate
7439-97-6	mercury
5326-00-1	Mercury, bromo[1-(methoxyphenylmethyl)-2-oxo-2-[(1,7,7-trimethylbicyclo[2.2.1]hept-2-yl)oxy]ethyl]-
13465-34-4	mercury (I) chromate
14836-60-3	nitric acid, mercury(1+) salt monohydrate
13444-75-2	mercury (II) chromate
7783-34-8	nitric acid, mercury(2+) salt monohydrate
592-63-2	mercury salt of acetic acid
68833-55-6	mercury acetylide
10124-48-8	aminomercury chloride
15516-76-4	mercury bis(4-chlorobenzoate)
13257-51-7	mercury bis(trifluoroacetate)
15385-58-7	mercury, dibromodi-, (Hg-Hg)
10031-18-2	mercury bromide (HgBr)
10112-91-1	dimercury dichloride
7789-10-8	mercury dichromate
7783-32-6	mercury diiodate
14099-12-8	mercury dipotassium tetrathiocyanate
7784-03-4	mercury disilver tetraiodide
645-99-8	mercury distearate
27575-47-9	mercury fluoride
7783-39-3	mercury difluoride
63937-14-4	(D-gluconato)mercury
12136-15-1	mercury nitride
1191-80-6	mercury dioleate
5970-32-1	[salicylato(2-)-O1,O2]mercury
20601-83-6	mercury selenide
12344-40-0	mercury silver iodide
589-65-1	mercury succinate
1344-48-5	mercury(II) sulfide
12068-90-5	mercury telluride
94022-47-6	mercury thallium dinitrate
13465-33-3	mercury(1+) bromate
71720-55-3	mercury(1+) ethyl sulphate
2923-15-1	mercury(1+) trifluoroacetate
22450-90-4	amminephenylmercury(1+) acetate
7756-49-2	mercury(2+) (9Z,12Z)-octadeca-9,12-dienoate
26719-07-3	mercury(2+) chloroacetate
53010-52-9	mercury(2+), bis(2,4,6-tri-2-pyridinyl-1,3,5-triazine-N1,N2,N6)-, (OC-6-1'2)-
3444-13-1	mercury(II) oxalate
7783-33-7	dipotassium tetraiodomercurate
103332-13-4	mercury, (2-ethylhexanoato-O)(1-methoxycyclohexyl)-
103369-15-9	mercury, (1-methoxycyclohexyl)(neodecanoato-O)-
104325-07-7	mercury, (1-methoxyethyl)(9-octadecenoato-O)-,
104325-08-8	mercury, (1-methoxycyclohexyl)(9-octadecenoato-O)-,
104335-53-7	mercury, (1-methoxyethyl)(neodecanoato-O)-
104339-46-0	mercury, (2-ethylhexanoato-O)(1-methoxyethyl)
129-16-8	mercury, (2',7'-dibromo-3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-4'-yl)hydroxy-, disodium salt
13302-00-6	(2-ethylhexanoato)phenylmercury
104-60-9	(oleato)phenylmercury
63468-53-1	mercury, (acetato-.kappa.O)(2-hydroxy-5-nitrophenyl)-
6283-24-5	4-aminophenylmercury acetate

SubstanceGroup No./CAS No. etc	Substance Name
5954-14-3	(acetato-O)[3-(chloromethoxy)propyl-C,O]mercury
19447-62-2	mercury, (acetato-.kappa.O)[4-[2-[4-(dimethylamino)phenyl]diazenyl]phenyl]-
68201-97-8	(acetato-O)diamminephenylmercury
26545-49-3	(neodecanoato-O)phenylmercury
24806-32-4	mercury, [.mu.-[2-dodecylbutanedioato(2-)-.kappa.O1:.kappa.O4]]diphenyldi-
33770-60-4	[2,5-dichloro-3,6-dihydroxy-2,5-cyclohexadiene-1,4-dionato(2-)-O1,O6]mercury
537-64-4	di-p-tolylmercury
63549-47-3	di(acetato-O)anilinemercury
14783-59-6	mercury, bis[(2-phenyldiazenecarbothioic acid-.kappa.S) 2-phenylhydrazidato-.kappa.N2]-, (T-4)-
24579-90-6	mercury, chloro(2-hydroxy-5-nitrophenyl)-
623-07-4	mercury, chloro(4-hydroxyphenyl)-
539-43-5	p-tolylmercury chloride
1785-43-9	mercury, chloro(ethanethiolato)-
90584-88-6	mercury, chloro[2-(2-cyclohexen-1-yl)-3-benzofuranyl]-
15785-93-0	mercury, chloro[4-[(2,4-dinitrophenyl)amino]phenyl]-
12055-37-7	mercury, compound with sodium (2:1)
57363-77-6	mercury, compound with sodium (4:1)
11083-41-3	mercury, compound with titanium (1:3)
629-35-6	mercury, dibutyl-
141-51-5	iodo(iodomethyl)mercury
86-85-1	methylmercury 8-quinolinolate
56724-82-4	mercury, phenyl[(2-phenyldiazenecarbothioic acid-.kappa.S) 2-phenylhydrazidato-.kappa.N2]-
103-27-5	phenylmercury propionate
3294-57-3	phenyl(trichloromethyl)mercury
115-09-3	chloromethylmercury
492-18-2	mersalyl
486-67-9	mersalyl acid
151-38-2	2-methoxyethylmercury acetate
502-39-6	1-cyano-3-(methylmercurio)guanidine
5902-76-1	methyl(pentachlorophenolato)mercury
22967-92-6	methylmercury
3626-13-9	methylmercury benzoate
1184-57-2	methylmercury hydroxide
517-16-8	n-(ethylmercurio)toluene-4-sulphonanilide
1336-96-5	naphthenic acids, mercury salts
13465-31-1	nitric acid, mercury(2+) salt, hemihydrate
16509-11-8	otimerate sodium
7616-83-3	mercury diperchlorate
14354-56-4	phenyl(quinolin-8-olato-N1,O8)mercury
3294-60-8	phenyl(tribromomethyl)mercury
62-38-4	(acetato-kappaO)(phenyl)mercury
100-57-2	phenylmercuric hydroxide
55-68-5	phenylmercuric nitrate
94-43-9	phenylmercury benzoate
100-56-1	phenylmercury chloride
32407-99-1	phenylmercury dimethyldithiocarbamate
8003-05-2	mixture of hydroxy(phenyl)mercury and (nitrato-kappaO)(phenyl)mercury
28086-13-7	phenylmercury salicylate
104-59-6	phenylmercury stearate
10451-12-4	phosphoric acid, mercury salt

SubstanceGroup No./CAS No. etc	Substance Name
22330-18-3	potassium triiodomercurate(1-)
7620-30-6	sodium [3-[[(3-carboxylatopropionamido)carbonyl]amino]-2-methoxypropyl]hydroxymercurate(1-)
3198-04-7	sodium 4-chloromercuriobenzoate
54-64-8	sodium ethanide[2-(sulfide-kappaS)benzoato-kappaO]mercurate(1-)
5964-24-9	sodium timerfonate
54295-90-8	tetrakis(acetato-O)[mu4-(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-2',4',5',7'-tetrayl)]tetramercury
18211-85-3	trimercury biscitrate
1345-09-1	cadmium mercury sulfide
7548-26-7	mercury, (2-mercaptoacetamidato-O,S)methyl
628-86-4	mercury difulminate
AL11	mercury compounds
11	**lead and its compounds**
14452-81-4	lead hydride
94246-92-1	(2-ethylhexanoato-O)(isodecanoato-O)lead
94246-91-0	(2-ethylhexanoato-O)(isononanoato-O)lead
94246-90-9	(2-ethylhexanoato-O)(isooctanoato-O)lead
94246-93-2	(2-ethylhexanoato-O)(neodecanoato-O)lead
94246-86-3	(isodecanoato-O)(isononanoato-O)lead
94246-85-2	(isodecanoato-O)(isooctanoato-O)lead
94246-87-4	(isodecanoato-O)(neodecanoato-O)lead
94246-84-1	(isononanoato-O)(isooctanoato-O)lead
94481-58-0	(isononanoato-O)(neodecanoato-O)lead
93894-64-5	(neononanoato-O)(neoundecanoato-O)lead
68901-12-2	alpha-D-glucopyranose, 1-(dihydrogen phosphate), lead salt
84837-22-9	[mu-(4,6-dinitroresorcinolato(2-)-O1,O3)]dihydroxydilead
94015-57-3	[mu-[[5,5'-azobis[1H-tetrazolato]](2-)]]dihydroxydilead
14450-60-3	citric acid, lead salt
512-26-5	trilead dicitrate
6107-83-1	1,2,3-propanetricarboxylic acid, 2-hydroxy-, lead(2+) salt (2:3), trihydrate
18608-34-9	1,2-benzenedicarboxylic acid, lead(2+) salt
90193-83-2	1,2-benzenedicarboxylic acid, lead(2+) salt, basic
12275-07-9	(maleato)trioxotetralead
54554-36-8	1,3,5-triazine-2,4,6(1H,3H,5H)-trione, lead salt
15245-44-0	lead(II) 2,4,6-trinitrobenzene-1,3-diolate
70268-38-1	lead(2+) nitroresorcinolate
68901-11-1	(R)-3,5,6-trihydroxy-4,6-bis(3-methylbut-2-enyl)-2-(3-methyl-2-oxobutyl)cyclohexa-2,4-dien-1-one, lead salt
13698-55-0	lead fumarate
90268-59-0	2-butenedioic acid (E)-, lead(2+) salt, basic
90268-66-9	2-butenedioic acid (Z)-, lead(2+) salt, basic
90552-19-5	2-propenoic acid, 2-methyl-, lead salt, basic
68155-47-5	2-propenoic acid, 2-methyl-, methyl ester, polymer with ethenylbenzene, lead(2+) 2-methyl-2-propenoate (1:2) and .alpha.-(2-methyl-1-oxo-2-propen-1-yl)-.omega.-[(2-methyl-1-oxo-2-propen-1-yl)oxy]poly(oxy-1,2-ethanediyl)
51105-45-4	3-(triphenylplumbyl)-1H-pyrazole
19651-80-0	5,5,13,13-tetradehydro-4,5-dihydro-4,8,10,15-tetranitro-7,11-metheno-11H,13H-tetrazolo[1,5-c][1,7,3,5,2,6]dioxadiazadiplumbacyclododecine
97952-39-1	lead 7-methyloctanoate
90388-15-1	9-hexadecenoic acid, lead(2+) salt, (Z)-, basic
15347-55-4	lead oleate
90459-88-4	9-octadecenoic acid (Z)-, lead salt, basic
51404-69-4	acetic acid, lead salt, basic

SubstanceGroup No./CAS No. etc	Substance Name
2587-82-8	acetoxytributylplumbane
5711-19-3	acetoxytrimethylplumbane
1162-06-7	acetoxytriphenylplumbane
53404-12-9	arsenic acid, lead (4+) salt
12608-25-2	lead oxide sulfite (Pb2O(SO3))
84961-75-1	benzenesulfonic acid, 4-C10-13-sec-alkyl derivitives, lead(2+) salts
17549-30-3	bis(diethyldithiocarbamato-S,S')lead
62451-77-8	bis(o-acetoxybenzoato)lead
15282-88-9	bis(pentane-2,4-dionato-O,O')lead
65229-22-3	bismuth lead ruthenium oxide
12048-28-1	bismuth, compound with lead (1:1)
815-84-9	lead tartrate
93892-65-0	lead(2+) ethylphenyldithiocarbamate
25510-11-6	lead carbonate
68604-05-7	castor oil, dehydrated, polymer with rosin, calcium lead zinc salt
1520-78-1	chlorotrimethylplumbane
1153-06-6	chlorotriphenylplumbane
1344-37-2	C.I. pigment Yellow 34
11119-70-3	chromium lead oxide
116565-74-3	chromium lead oxide sulfate, silica-modified
68411-07-4	copper, .beta.-resorcylate salicylate lead complexes
62637-99-4	lead bis(4-cyclohexylbutyrate)
90342-24-8	decanoic acid, branched, lead salts
20403-42-3	decanoic acid, lead salt
6928-68-3	diacetoxydiphenylplumbane
109707-90-6	diamyldithiocarbamate, lead
16450-50-3	diantimony lead tetroxide
56189-09-4	dioxobis(stearato)dilead
11116-83-9	dibismuth dilead tetraruthenium tridecaoxide
12017-86-6	dilead chromate dihydroxide
37240-96-3	dilead dirhodium heptaoxide
2117-69-3	diphenyllead dichloride
2388-00-3	hexaethyldiplumbane
3124-01-4	hexaphenyldiplumbane
3249-61-4	docosanoic acid, lead salt
90342-56-6	dodecanoic acid, lead salt, basic
15773-55-4	lead dilaurate
68131-60-2	lead salt of C12-18 fatty acids
93165-26-5	fatty acids, C14-26, lead salts
91031-62-8	fatty acids, C16-18, lead salts
84776-54-5	fatty acids, C18-24, lead salts
125328-49-6	fatty acids, C4- 20-branched, lead salts
91002-20-9	fatty acids, C6-19-branched, lead salts
91031-61-7	fatty acids, C8-10, lead salts
85049-42-9	fatty acids, C8-10-branched, lead salts
68409-79-0	fatty acids, C8-10-branched, lead salts, basic
84776-53-4	fatty acids, C8-12, lead salts
84776-36-3	fatty acids, C8-18 and C18-unsaturated, lead salts
91031-60-6	fatty acids, C8-9, lead salts
81412-57-9	fatty acids, C9-11-branched, lead salts
91697-36-8	fatty acids, castor-oil, hydrogenated, lead salts
92044-89-8	fatty acids, coco, lead salts
61788-53-2	fatty acids, tall-oil, lead manganese salts
61788-54-3	fatty acids, tall-oil, lead salts
94349-78-7	fatty acids, tallow, reaction products with lead oxide

SubstanceGroup No./CAS No. etc	Substance Name
70514-05-5	flue dust, lead blast furnace
7056-83-9	formic acid, lead salt
68989-89-9	gilsonite, polymer with linseed oil, lead salt
22904-40-1	disodium lead N,N'-ethylenebis[N-(carboxylatomethyl)aminoacetate]
12029-23-1	hafnium lead trioxide
94006-20-9	hexacosanoic acid, lead salt
90388-09-3	hexadecanoic acid, lead salt, basic
90388-10-6	hexadecanoic acid, lead(2+) salt, basic
301-08-6	lead bis(2-ethylhexanoate)
23621-79-6	3,5,5-trimethylhexanoic acid, lead salt
71753-04-3	hydroxy(neodecanoato-O)lead
12023-90-4	dodecairon lead nonadecaoxide (Fe12O19Pb)
90431-14-4	isodecanoic acid, lead salt, basic
91671-82-8	isodecanoic acid, lead(2+) salt, basic
27253-41-4	lead(II) 7-methyloctanoate
90431-21-3	isononanoic acid, lead salt, basic
64504-12-7	lead salt of isooctanoic acid
90431-26-8	isooctanoic acid, lead salt, basic
91671-83-9	isooctanoic acid, lead(2+) salt, basic
91671-84-0	isoundecanoic acid, lead(2+) salt, basic
15306-30-6	lauric acid, lead salt
69029-71-6	leach residues, lead slag
7439-92-1	lead
6080-56-4	lead acetate trihydrate
35029-96-0	lead (II) methylthiolate
546-67-8	lead tetraacetate
65127-78-8	lead 12-hydroxyoctadecanoate
20936-32-7	lead 2,4-dihydroxybenzoate
14255-04-0	lead 210
16996-40-0	2-ethylhexanoic acid, lead salt
93839-98-6	lead 3-(acetamido)phthalate
60580-60-1	lead 5-nitroterephthalate
15347-57-6	lead acetate
301-04-2	lead(II) acetate
14466-01-4	lead acrylate
69011-59-2	lead alloy, base, dross
69011-60-5	lead alloy, base, Pb,Sn, dross
13510-89-9	diantimony trilead octaoxide
12266-38-5	antimony, compound with lead (1:1)
3687-31-8	trilead(II) bis(arsenate)
7784-40-9	lead(II) hydrogenarsenate
10102-48-4	lead arsenate (Pb3(AsO4)2)
7645-25-2	arsenic acid (H3AsO4), lead salt (1:?)
10031-13-7	lead arsenite
13424-46-9	lead(II) diazide
15907-04-7	lead benzoate
58405-97-3	lead bis(12-hydroxystearate)
93840-04-1	lead bis(2-ethylhexanolate)
35837-70-8	lead bis(3,5,5-trimethylhexanoate)
85392-78-5	lead bis(5-oxo-DL-prolinate)
85392-77-4	lead bis(5-oxo-L-prolinate)
52847-85-5	lead(II) Bis(7-methyloctanoate)
93965-29-8	lead(2+) diisoundecanoate
72586-00-6	lead bis(nonylphenolate)
41556-46-1	lead bis(piperidine-1-carbodithioate)

SubstanceGroup No./CAS No. etc	Substance Name
84394-98-9	lead bis(p-octylphenolate)
85865-91-4	lead bis(tetracosylbenzenesulphonate)
93966-37-1	lead bis(tricosanoate)
85865-92-5	lead bis[didodecylbenzenesulphonate]
14720-53-7	lead metaborate
41453-50-3	lead bis(2,4-dihydroxybenzoate)
10031-22-8	lead dibromide
598-63-0	carbonic acid, lead(2+) salt (1:1)
1319-46-6	dicarbonato(dihydroxy)trilead
7758-95-4	lead dichloride
12612-47-4	lead chloride
12205-72-0	lead chloride oxide
7758-97-6	lead(II) tetraoxidochromate
18454-12-1	dilead chromate oxide
11113-70-5	silicic acid, chromium lead salt
69011-07-0	trilead chromate silicate
51899-02-6	lead chromate sulfate (Pb9(CrO4)5(SO4)4)
20890-10-2	lead cyanamidate
20837-86-9	cyanamide, lead(2+) salt (1:1)
35112-70-0	lead cyanamid
592-05-2	lead(II) dicyanide
873-54-1	lead dibenzoate
34018-28-5	lead dibromate
65119-94-0	lead dibutanolate
819-73-8	lead dibutyrate
29597-84-0	lead didocosanoate
15773-53-2	lead dihexanoate
18917-82-3	lead dilactate
33627-12-2	lead dilinoleate
19010-66-3	lead bis(dimethyldithiocarbamate)
32112-52-0	lead dimyristate
15773-56-5	lead dipalmitate
10294-58-3	lead diphosphinate
6477-64-1	lead(II) dipicrate
814-70-0	lead dipropionate
13767-78-7	lead disulphamidate
12137-74-5	lead disulphide
94232-40-3	lead diundec-10-enoate
13814-96-5	lead bis(tetrafluoroborate)
7783-46-2	lead difluoride
97889-90-2	lead fluoride hydroxide
25808-74-6	lead hexafluorosilicate
811-54-1	lead diformate
12435-47-1	lead germanate
1310-03-8	lead hexafluorosilicate dihydrate
19783-14-3	lead hydroxide
39345-91-0	lead hydroxide
12268-84-7	lead hydroxide nitrate
87903-39-7	lead, hydroxy[2-(hydroxy-.kappa.O)benzoato-.kappa.O]-
94266-32-7	lead icosanoate
94266-31-6	lead icosanoate (1:2)
25659-31-8	lead diiodate
10101-63-0	lead diiodide
38787-87-0	lead isophthalate
16996-51-3	(9Z,12Z)-octadeca-9,12-dienoic acid, lead salt

SubstanceGroup No./CAS No. etc	Substance Name
816-68-2	lead malate
19136-34-6	lead maleate
1068-61-7	lead(2+) methacrylate
52609-46-8	lead methacrylate
10190-55-3	lead molybdate
1317-36-8	lead oxide
20403-41-2	myristic acid, lead salt
50825-29-1	lead naphthalate
61790-14-5	naphthenic acids, lead salts
12034-88-7	lead diniobium hexaoxide
27253-28-7	lead(II) 7,7-dimethyloctanoate
10099-74-8	lead dinitrate
51317-24-9	nitroresorcinol, lead salt
1120-46-3	lead dioleate
814-93-7	lead oxalate
1335-25-7	lead oxide
12059-89-1	dilead oxide (Pb2O)
68411-78-9	lead oxide (PbO), lead-contg.
69029-53-4	lead oxide (PbO), retort
12141-20-7	trilead dioxide phosphonate
1344-40-7	bis(trilead hydroxide oxide phosphite) monohydrate
12765-51-4	lead oxide sulfate
12036-76-9	dilead oxide sulfate
12202-17-4	dioxo(distearato)trilead
12065-90-6	pentalead tetraoxide sulfate
19528-55-3	lead palmitate
93966-74-6	lead pentadecanoate
13637-76-8	lead diperchlorate
1309-60-0	lead dioxide
7446-27-7	trilead bis(orthophosphate)
16183-12-3	lead phthalate
6838-85-3	lead phthalate
25721-38-4	lead picrate
42558-73-6	lead propionate
13453-66-2	dilead pyrophosphate
37194-88-0	dilead diruthenium hexaoxide
29473-77-6	lead(2+) sebacate
7446-15-3	lead selenate
12069-00-0	lead selenide
7488-51-9	lead(2+) selenite
11120-22-2	silicic acid, lead salt
13566-17-1	silicic acid (H4SiO4), lead(2+) salt (1:2)
22569-74-0	lead silicate
12687-78-4	lead silicate sulfate
67711-86-8	dilead silicate sulphate
7428-48-0	stearic acid, lead salt
52652-59-2	lead stearate dibasic
1335-32-6	lead, bis(acetato-O)tetrahydroxytri-
1191-18-0	lead succinate
15739-80-7	sulphuric acid, lead salt
7446-14-2	sulfuric acid, lead(2+) salt (1:1)
12397-06-7	lead sulfate, tribasic
1314-87-0	lead sulfide
116565-73-2	lead sulfomolybdochromate, silica encapsulated
12065-68-8	lead ditantalum hexaoxide

SubstanceGroup No./CAS No. etc	Substance Name
1314-91-6	lead telluride
13845-35-7	lead(2+) tellurium tetraoxide
13463-30-4	lead tetrachloride
93966-38-2	lead tetracosanoate
1314-41-6	trilead tetraoxide
592-87-0	lead dithiocyanatee
13478-50-7	lead thiosulfate
12036-31-6	lead tin trioxide
12060-00-3	lead titanium trioxide
12626-81-2	lead titanium zirconium trioxide
1314-27-8	lead oxide (Pb2O3)
7759-01-5	lead tungsten tetraoxide
12737-98-3	lead tungsten oxide
10099-79-3	lead divanadium hexaoxide
12060-01-4	lead zirconium trioxide
13094-04-7	lead(2+) (R)-12-hydroxyoleate
93858-24-3	lead(2+) (Z)-hexadec-9-enoate
13406-89-8	lead(2+) 2,4-dinitroresorcinolate
85292-77-9	lead(2+) 4-(1,1-dimethylethyl)benzoate
93858-23-2	lead(2+) 4,4'-isopropylidenebisphenolate
65121-76-8	lead(2+) 4,6-dinitro-o-cresolate
867-47-0	lead(2+) acrylate
15773-52-1	lead(2+) decanoate
63399-94-0	lead(2+) diheptadecanoatee
95892-13-0	lead(2+) diisohexadecanoate
70727-02-5	lead(2+) isooctadecanoate
71684-29-2	lead(2+) dineodecanoate
93894-48-5	lead(2+) dineononanoate
93894-49-6	lead(2+) dineoundecanoate
7319-86-0	lead(2+) octanoate
7717-46-6	lead(4+) stearate
71686-03-8	lead(II) fumarate
84852-34-6	lead(2+) diisodecanoate
93981-67-0	lead(2+) diisooctanoate
17406-54-1	lead(II) maleate
7783-59-7	lead(IV) fluoride
79357-62-3	diplumboxane, 1-(2-methyl-4,6-dinitrophenoxy)-3-(nitrooxy)-, hydrate (1:1)
17976-43-1	2,4,6,8,3,5,7-benzotetraoxatriplumbacycloundecin-3,5,7-triylidene, 1,9-dihydro-1,9-dioxo-
69011-06-9	dioxo(phthalato)trilead
57142-78-6	[phthalato(2-)]oxodilead
15187-16-3	lead, [29H,31H-phthalocyaninato(2-)-.kappa.N29,.kappa.N30,.kappa.N31,.kappa.N32]-, (SP-4-1)-
90431-30-4	lead, 2-ethylhexanoate isodecanoate complexes, basic
90431-31-5	lead, 2-ethylhexanoate isononanoate complexes, basic
90431-32-6	lead, 2-ethylhexanoate isooctanoate complexes, basic
90431-33-7	lead, 2-ethylhexanoate naphthenate complexes
90431-34-8	lead, 2-ethylhexanoate naphthenate complexes, basic
90431-35-9	lead, 2-ethylhexanoate neodecanoate complexes, basic
68187-37-1	lead, 2-ethylhexanoate tall-oil fatty acids complexes
70513-89-2	lead, alkyls, manufg. wastes
69029-50-1	lead, antimonial
69029-51-2	lead, antimonial, dross
15748-73-9	lead disalicylate
36501-84-5	lead bis(dipentyldithiocarbamate)

SubstanceGroup No./CAS No. etc	Substance Name
75790-73-7	lead, bis(N,N-diphenylcarbamodithioato-.kappa.S,.kappa.S')-, (T-4)-
12565-18-3	lead, bis(octadecanoato)dioxotri-
12578-12-0	dioxo(distearato)trilead
97808-88-3	lead, bullion
79803-79-5	lead, C3-13-fatty acid naphthenate complexes
84067-00-5	lead, C4-10-fatty acid naphthenate complexes
92200-92-5	lead, C4-10-fatty acid octanoate complexes
84066-98-8	lead, C5-23-branched carboxylate C4-10-fatty acid complexes
83711-45-9	lead, C5-23-branched carboxylate C4-10-fatty acid naphthenate complexes
83711-46-0	lead, C5-23-branched carboxylate naphthenate complexes
83711-47-1	lead, C5-23-branched carboxylate naphthenate octanoate complexes
84066-99-9	lead, C5-23-branched carboxylate octanoate complexes
70084-67-2	lead, C6-19-branched carboxylate naphthenate complexes
90431-28-0	lead, C8-10-branched fatty acids C9-11-neofatty acids naphthenate complexes
90431-27-9	lead, C8-10-branched fatty acids C9-11-neofatty acids naphthenate complexes, overbased
125494-56-6	lead, C9- 28-neocarboxylate 2-ethylhexanoate complexes, basic
70321-55-0	lead, decanoate octanoate complexes
96471-22-6	lead, di-.mu.-hydroxy(2-methyl-4,6-dinitrophenolato-.kappa.O)(nitrato-.kappa.O)di-
12403-82-6	dihydroxy[styphnato(2-)]dilead
69029-52-3	lead, dross
69029-45-4	lead, dross, antimony-rich
69029-46-5	lead, dross, bismuth-rich
69227-11-8	lead, dross, copper-rich
100656-49-3	lead, dross, vanadium-zinc-contg.
90431-36-0	lead, isodecanoate isononanoate complexes, basic
90431-37-1	lead, isodecanoate isooctanoate complexes, basic
90431-38-2	lead, isodecanoate naphthenate complexes
101012-92-4	lead, isodecanoate naphthenate complexes, basic
90431-39-3	lead, isodecanoate neodecanoate complexes, basic
84929-94-2	lead, isononanoate isooctanoate complexes, basic
84929-97-5	lead, isononanoate naphthenate complexes
90431-40-6	lead, isononanoate naphthenate complexes, basic
90431-41-7	lead, isononanoate neodecanoate complexes, basic
68515-80-0	lead, isooctanoate naphthenate complexes
90431-42-8	lead, isooctanoate naphthenate complexes, basic
101013-06-3	lead, isooctanoate neodecanoate complexes
84929-95-3	lead, isooctanoate neodecanoate complexes, basic
90431-43-9	lead, naphthenate neodecanoate complexes
84929-96-4	lead, naphthenate neodecanoate complexes, basic
90431-44-0	lead, neononanoate neoundecanoate complexes, basic
94551-60-7	lead, zinc dross
68990-75-0	linseed oil, polymer with tung oil, lead salt
68152-99-8	linseed oil, reaction products with lead oxide (Pb3O4) and mastic
17570-76-2	lead(II) dimethanesulfonate
12656-85-8	C.I. Pigment Red 104
63568-30-9	lead(2+) bis(diisononylnaphthalenesulfonate)
61867-68-3	naphthalenesulfonic acid, dinonyl-, lead(2+) salt
91078-81-8	naphthenic acids, lead (2+) salts
61788-52-1	naphthenic acids, lead manganese salts
92045-67-5	naphthenic acids, lead salts, basic
90459-25-9	neodecanoic acid, lead salt, basic
90459-26-0	neononanoic acid, lead salt, basic

SubstanceGroup No./CAS No. etc	Substance Name
90459-28-2	neoundecanoic acid, lead salt, basic
97953-08-7	nitric acid, lead(2+) salt, reaction products with sodium tin oxide
13826-65-8	lead nitrite
90459-51-1	octadecanoic acid, lead salt, basic
90459-52-2	octadecanoic acid, lead(2+) salt, basic
52080-60-1	octadecanoic acid, lead(2+) salt, tribasic
15696-43-2	octanoic acid, lead salt
35498-15-8	orthoboric acid, lead(2+) salt
99749-31-2	perchloric acid, reaction products with lead oxide (PbO) and triethanolamine
67674-14-0	petrolatum (petroleum), oxidized, lead salt
50319-14-7	phenol,, 2-methyldinitro-, lead salt
68586-21-0	lead(2+) dodecylphenolate
122332-23-4	phenol, tetrapropylene-, lead(2+) salt (2:1)
16038-76-9	lead phosphite
53807-64-0	phosphonic acid, lead salt, basic
24824-71-3	phosphonic acid, lead(2+) salt
13453-65-1	phosphonic acid, lead(2+) salt (1:1)
15521-60-5	phosphonic acid, lead(2+) salt (2:1)
15845-52-0	lead hydrogenorthophosphate
93925-27-0	phosphoric acid, mixed butyl and hexyl diesters, lead(2+) salts
20383-42-0	phosphorodithioate O,O-bis(1,3-dimethylbutyl), lead salt
91783-10-7	phosphorodithioic acid, mixed O,O-bis(Bu and pentyl) esters, lead(2+) salt
1067-14-7	chlorotriethylplumbane
1762-27-2	diethyldimethylplumbane
68610-17-3	plumbane, ethyl methyl derivs.
1762-26-1	ethyltrimethylplumbane
1920-90-7	tetrabutylplumbane
14846-40-3	plumbane, tetrakis(1-methylethyl)-
65151-08-8	plumbane, tetrakis(1-methylpropyl)-
1762-28-3	triethylmethylplumbane
12034-30-9	lead disodium dioxide
12013-69-3	dicalcium lead tetraoxide
12372-45-1	potassium pentadecaoxodiplumbatepentaniobate(1-)
102110-49-6	residues, copper-iron-lead-nickel matte, sulfuric acid-insol.
6107-93-3	salicylate, lead (II)
100402-96-8	silicic acid (H2SiO3), calcium salt (1:1), lead and manganese-doped
10099-76-0	lead(2+) silicate
15906-71-5	lead silicate
102110-36-1	silicic acid, calcium salt, lead and manganese-doped
68130-19-8	silicic acid, lead nickel salt
70514-37-3	slimes and sludges, lead sinter dust scrubber
93821-72-8	speiss,, lead-zinc
1326-05-2	2-(2,4,5,7-tetrabromo-3,6-dihydroxyxanthen-9-yl)benzoic acid, lead salt
1072-35-1	lead(II) distearate
42579-89-5	sulphuric acid, barium lead salt
99328-54-8	sulfuric acid, barium salt (1:1), lead-doped
52732-72-6	sulfuric acid, lead salt, tetrabasic
90583-07-6	sulfuric acid, lead(2+) salt, basic
52231-92-2	sulfurous acid, lead salt, basic
62229-08-7	sulfurous acid, lead salt, dibasic
90583-37-2	sulfurous acid, lead(2+) salt, basic
7446-10-8	lead sulphite
15851-47-5	lead(2+) tellurium trioxide
90583-65-6	tetradecanoic acid, lead salt, basic
78-00-2	tetraethyllead

SubstanceGroup No./CAS No. etc	Substance Name
75-74-1	lead, tetramethyl-
595-89-1	tetraphenyllead
3440-75-3	plumbane, tetrapropyl-
26265-65-6	thiosulphuric acid, lead salt
39412-44-7	lead/Tin alloy
51325-28-1	trinitrophloroglucinol, lead salt
61789-50-2	naphthenic acid, cobalt lead manganese salt
10214-39-8	boric acid (HBO2), lead(2+) salt (2:1), monohydrate
68603-83-8	fatty acids, C6-19-branched, lead salts, basic
78690-68-3	pigment Lightfast lead-molybdate orange OS (9CI)
8012-00-8	C.I. pigment yellow 41
68784-75-8	silicic acid (H2Si2O5), barium salt (1:1), lead-doped
AL12	lead compounds
12	**hexavalent chromium compounds**
7789-09-5	diammonium heptaoxidodichromate
7788-98-9	ammonium chromate
10294-40-3	barium chromate
1344-38-3	basic lead chromate orange
13765-19-0	calcium chromate
14307-33-6	calcium dichromate
13454-78-9	dicesium chromate
16037-50-6	potassium chlorotrioxochromate
7738-94-5	dihydrogen(tetraoxidochromate)
13530-68-2	dihydrogen(heptaoxidodichromate)
15586-38-6	nickel dichromate
16565-94-9	chromic acid (H2CrO4), lanthanum(3+) salt (3:2)
13423-61-5	magnesium chromate
14445-91-1	chromic acid, ammonium salt
27133-66-0	chromic acid, barium potassium salt
41189-36-0	chromic acid, potassium zinc salt
18540-29-9	chromium(6+)
14986-48-2	chromium (VI) chloride
68475-49-0	chromium hydroxide oxide silicate
1333-82-0	chromium trioxide
14977-61-8	chromyl dichloride
13455-25-9	cobalt chromate
13548-42-0	copper chromate
13675-47-3	copper dichromate
13453-35-5	dithallium dichromate
7758-97-6	lead(II) tetraoxidochromate
18454-12-1	dilead chromate oxide
1344-37-2	C.I. Pigment Yellow 34
14307-35-8	lithium chromate
14104-85-9	magnesium dichromate
12656-85-8	C.I. Pigment Red 104
14721-18-7	nickel chromate
99328-50-4	nitric acid, barium salt, reaction products with ammonia, chromic acid (H2CrO4) diammonium salt and copper(2+) dinitrate, calcined
100402-65-1	nitric acid, copper(2+) salt, reaction products with ammonia, chromic acid (H2CrO4) diammonium salt and manganese(2+) dinitrate, kilned
7789-00-6	dipotassium tetraoxidochromate
7778-50-9	dipotassium heptaoxidodichromate
7784-01-2	silver chromate
7789-12-0	disodium heptaoxidodichromate dihydrate
24613-89-6	dichromium(III) tris(chromate)

SubstanceGroup No./CAS No. etc	Substance Name
7775-11-3	disodium tetraoxidochromate
10588-01-9	disodium heptaoxidodichromate
7789-06-2	strontium tetraoxidochromate
13473-75-1	dithallium chromate
1328-67-2	zinc chromate
13530-65-9	zinc chromate
15930-94-6	zinc chromate hydroxide
14018-95-2	zinc dichromate
11103-86-9	potassium dizinc(II) bis(chromate) hydroxide
37300-23-5	C.I. Pigment Yellow 36
11115-74-5	dihydroxy-dioxo-chromium
12433-50-0	dipotassium heptadecaoxotetrazincatetetrachromate(2-)
49663-84-5	pentazinc(II) chromate octahydroxide
AL13	acids generated from chromium trioxide and their oligomers:
AL13	oligomers of chromic acid and dichromic acid
AL13	hexavalent cromium compounds
14	**organiostannic compounds**
HSC380309	tributyltin carboxylate(C=9-15)
31732-71-5	rel-(2R,3S)-bis(tributan-1-ylstannyl) 2,3-dibromosuccinate
67772-01-4	poly[(methyl methacrylate)-co-(octan-1-yl acrylate)-co-(tributan-1-ylstannyl methacrylate)]
3644-37-9	(2-biphenyloxy)tributyltin
7094-94-2	triphenylstannyl chloroacetate
26239-64-5	tributan-1-ylstannyl (1R,4aR,4bR,10aR)-7-isopropyl-1,4a-dimethyl-1,2,3,4,4a,4b,5,6,10,10a-decahydrophenanthrene-1-carboxylate
752-58-9	1,3,5-tris(tributyltin)-S-triazine-2,4,6-trione
4027-18-3	4-oxo-4-[(tributylstannyl)oxy]but-2-enoic acid
54849-38-6	triisooctyl 2,2',2"-[(methylstannylidyne)tris(thio)]triacetate
25711-26-6	5,5,12,12-tetrabutyl-8-methylene-7,10-dioxo-6,11-dioxa-5,12-distannahexadecane
56-35-9	1,1,1,3,3,3-hexabutyldistannoxane
13356-08-6	1,1,1,3,3,3-hexakis(2-methyl-2-phenylpropyl)distannoxane
14275-57-1	bis(tributan-1-ylstannyl) maleate
4782-29-0	bis(tributan-1-ylstannyl) phthalate
6454-35-9	bis(tributan-1-ylstannyl) fumarate
1066-44-0	bromotrimethylstannane
3644-32-4	p-nitropphenoxytributyltin
900-95-8	triphenylstannyl acetate
2767-54-6	triethyltin bromide
379-52-2	fluoro(triphenyl)stannane
1983-10-4	tributan-1-yl(fluoro)stannane
3090-36-6	tributan-1-ylstannyl dodecanoate
28801-69-6	tributyl(neodecanoyloxy)stannane
3090-35-5	tributyl(oleoyloxy)stannane
56573-85-4	tin-san
688-73-3	tri-n-butyltin hydride
73940-89-3	tributyltin .alpha.-(2,4,5-trichlorophenoxy) propionate
73927-95-4	tributyltin .beta.-ioD/Propionate
5035-67-6	tributyl[(2-ethylhexanoyl)oxy]stannane
56-36-0	tributylstannyl acetate
13331-52-7	(acryloyloxy)tributylstannane
4342-36-3	stannane, (benzoyloxy)tributyl-
1461-23-0	tributyltin bromide
1461-22-9	tributan-1-yl(chloro)stannane
7342-38-3	chloro(triisobutyl)stannane

SubstanceGroup No./CAS No. etc	Substance Name
5847-52-9	tributyltin chloroacetate
27147-18-8	tributyl[(1-oxo-3-phenyl-2-propenyl)oxy]stannane
4027-17-2	tributyltin cyanate
2179-92-2	tributyltin cyanide
20369-63-5	tributyltin dimethyldithiocarbamate
33550-22-0	tributyltin gamma-chlorobuthrate
1067-97-6	tributyltin hydroxide
7342-47-4	tributyltin iodide
73927-91-0	tributyltin iodoacetate
73927-97-6	tributyltin isooctylthioacetate
53404-82-3	isopropyl 4-oxo-4-[(tributylstannyl)oxy]butyrate
681-99-2	tributyltin isothiocyanate
24124-25-2	(Z,Z)-tributyl(octadeca-9,12-dienoyloxy)stannane
2155-70-6	tributan-1-ylstannyl methacrylate
13302-06-2	tributyltin methanesulphonate
1067-52-3	tributyltin methoxide
53466-85-6	tributyltin monopropylene glycol maleate
36631-23-9	tributyltin naphthenate
85409-17-2	stannane, tributyl-, mono(naphthenoyloxy) derivatives.
3380-34-5	triclosan
2893-78-9	1,3-dichloro-1,3,5-triazinane-2,4,6-trione, sodium salt
51580-86-0	sodium 3,5-dichloro-2,4,6-trioxo-1,3,5-triazinan-1-ide dihydrate
4027-14-9	tributyltin nonanoate
73927-93-2	tributyltin o-iodobenzoate
73940-88-2	tributyltin p-iodobenzonate
6517-25-5	tributan-1-ylstannyl sulfamate
69226-47-7	tributyltin undecylenate
41083-11-8	1-(tricyclohexylstannyl)-1H-1,2,4-triazole
1907-13-7	triethyltin acetate
994-31-0	triethyltin chloride
994-32-1	triethyltin hydroxide
2943-86-4	triethyl tin iodide
1529-30-2	triethyltin phenoxide
1118-14-5	trimethyltin acetate
1118-03-2	trimethyltin azide
1066-45-1	trimethyltin chloride
56-24-6	stannane, hydroxytrimethyl-
811-73-4	trimethyltin iodide
63869-87-4	trimethyltin sulphate
4638-25-9	trimethyltin thiocyanate
4342-30-7	tributylstannyl salicylate
47672-31-1	triphenylstannyl decanoate
18380-71-7	triphenylstannyl 2,2,4,4-tetramethylpentanoate
18380-72-8	triphenylstannyl 2-isopropyl-2,3-dimethylbutanoate
94850-90-5	triphenylstannyl undecanoatelstannyl decanoate
639-58-7	chloro(triphenyl)stannane
1803-12-9	triphenylstannyl dimethyldithiocarbamate
892-20-6	triphenyltin hydride
76-87-9	triphenylstannanol
894-09-7	triphenyltin iodide
3267-78-5	tripropyltin acetate
2767-61-5	tripropyltin bromide
2279-76-7	chloro(tripropan-1-yl)stannane
7342-45-2	tripropyltin iodide
73927-92-1	tripropyltin iodoacetate

SubstanceGroup No./CAS No. etc	Substance Name
57808-37-4	tripropyltin laurate
4154-35-2	tripropyltin methacrylate
AL52	tricyclohexyl tin compounds
AL52	triethyltin compounds
AL52	trihexyltin compounds
AL52	trimethyltin compounds
AL52	trioctyltin compounds
AL52	tripentyltin compounds
AL14	triphenyltin compounds
AL52	tripropyltin compounds
AL15	tributyltin compounds
AL52	tri-substituted organiostannic compounds
14254-22-9	butoxydibutylchlorostannane
22535-42-8	Isopropyl (Z,Z)-9,9-dibutyl-2-methyl-4,7,11-trioxo-3,8,10-trioxa-9-stannatetradeca-5,12-dien-14-oate
13173-04-1	Ethyl (Z,Z)-9,9-dibutyl-4,7,11-trioxo-3,8,10-trioxa-9-stannatetradeca-5,12-dien-14-oate
33466-31-8	dodecyl (Z,Z)-6,6-dibutyl-4,8,11-trioxo-5,7,12-trioxa-6-stannatetracosa-2,9-dienoate
32011-18-0	acetate, S,S'-bisoctylmercapto-, dibutyltin
17523-06-7	bis (acetato) dibutyltin
1002-53-5	tin and compounds (dibutyltin hydride)
10584-98-2	8-Oxa-3,5-dithia-4-stannatetradecanoic acid, 4,4-dibutyl-10-ethyl-7-oxo-, 2-ethylhexyl ester
17036-31-6	octyl (Z,Z)-6,6-dibutyl-4,8,11-trioxo-5,7,12-trioxa-6-stannaicosa-2,9-dienoate
25168-21-2	diisooctyl 4,4'-[(dibutylstannylene)bis(oxy)]bis[4-oxoisocrotonate]
25168-22-3	dibutylstannylene dineododecanoate
28660-67-5	dibutylbis(myristoyloxy)stannane
4253-22-9	dibutylthioxostannane
59963-28-9	dibutylbis[(1-oxoisooctadecyl)oxy]stannane
93925-42-9	silicic acid (H4SiO4), tetraethyl ester, reaction products with bis(acetyloxy)dibutylstannane
54581-65-6	dibutylbis(ethyl 3-oxobutyrato-O1',O3)tin
53202-61-2	2-ethylhexyl 5,5-dibutyl-12-ethyl-9-oxo-10-oxa-4,6-dithia-5-stannahexadecanoate
7324-74-5	benzyl (Z,Z)-8,8-dibutyl-3,6,10-trioxo-1-phenyl-2,7,9-trioxa-8-stannatrideca-4,11-dien-13-oate
5587-52-0	(Z,Z)-dibutylbis[[4-(cyclohexyloxy)-1,4-dioxoallyl]oxy]stannane
25168-24-5	diisooctyl 2,2'-[(dibutylstannylene)bis(thio)]diacetate
51287-83-3	dodecyl 5,5-dibutyl-9-oxo-10-oxa-4,6-dithia-5-stannadocosanoate
2781-09-1	octyl 4,4-dibutyl-7-oxo-8-oxa-3,5-dithia-4-stannahexadecanoate
29881-72-9	(Z)-octadec-9-enyl (all-Z)-6,6-dibutyl-4,8,11-trioxo-5,7,12-trioxa-6-stannatriaconta-2,9,21-trienoate
26761-46-6	diisooctyl 3,3'-[(dibutylstannylene)bis(thio)]dipropionate
1067-33-0	dibutyltin di(acetate)
5847-54-1	bis(benzoyloxy)dibutylstannane
3349-36-8	dibutoxydibutylstannane
683-18-1	dibutan-1-yl(dichloro)stannane
19704-60-0	dibutyl[bis(hexanoyloxy)]stannane
77-58-7	stannane, dibutylbis[(1-oxododecyl)oxy]-
1185-81-5	dibutylbis(dodecylthio)stannane
10192-92-4	(Z,Z)-4,4'-[(dibutylstannylene)bis(oxy)]bis[4-oxo-2-butenoic acid]
1067-55-6	dibutyldimethoxystannane
4731-77-5	dibutylbis(octanoyloxy)stannane

SubstanceGroup No./CAS No. etc	Substance Name
13323-62-1	dibutyltin dioleate
13323-63-2	dibutylbis(palmitoyloxy)stannane
14214-24-5	dibutylbis[(2-hydroxybenzoyl)oxy]stannane
5847-55-2	dibutylbis(stearoyloxy)stannane
75113-37-0	1,3,2,4-dioxastannaboretane, 2,2-dibutyl-4-hydroxy-
85702-74-5	dibutylbis[(1-oxoisooctyl)oxy]stannane
85391-79-3	dibutylbis{[(Z,Z)-1-oxooctadeca-9,12-dienyl]oxy}stannane
95873-60-2	dibutylbis[(Z,Z,Z)-octadeca-9,12,15-trienoyloxy]stannane
78-04-6	dibutyltin maleate
78-20-6	2,2-dibutyl-1,3,2-oxathiastannolan-5-one
78-06-8	2,2-dibutyldihydro-6H-1,3,2-oxathiastannin-6-one
818-08-6	stannane, dibutyloxo-
26636-01-1	diisooctyl 2,2'-[(dimethylstannylene)bis(thio)]diacetate
15546-12-0	2-ethylhexyl 6,6-dibutyl-14-ethyl-4,8,11-trioxo-5,7,12-trioxa-6-stannaoctadeca-2,9-dienoate
85508-00-5	stannane, dibutyl-, bis(C8-18 and C18-unsatd. fatty acyloxy) derivs.
15546-11-9	methyl (Z,Z)-8,8-dibutyl-3,6,10-trioxo-2,7,9-trioxa-8-stannatrideca-4,11-dien-13-oate
15719-34-3	dibutyltin diisothiocyanate
15546-16-4	butyl (Z,Z)-6,6-dibutyl-4,8,11-trioxo-5,7,12-trioxa-6-stannahexadeca-2,9-dienoate
2781-10-4	di-n-butyltin di-2-ethylhexanoate
163206-28-8	tin, dibutyl(1,2-ethanediamine-.kappa.N1,.kappa.N2)bis(1-isooctyl 2-butenedioato-.kappa.O4)-
68239-46-3	dibutyl[N-(carboxymethyl)-N-(2-hydroxyethyl)glycinato(2-)]tin
22673-19-4	tin, dibutylbis(2,4-pentanedionato-O,O')-, (OC-6-11)-
32011-19-1	dibutylbis(methyl 3-mercaptopropionato-O,S)tin
67924-24-7	dibutylbis(triethylamine)difluorotin
AL53	dibutyltin compounds
26401-97-8	diisooctyl 2,2'-[(dioctylstannylene)bis(thio)]diacetate
22205-30-7	bis(dodecylthio)dioctylstannane
68109-88-6	ethyl 9,9-dioctyl-4,7,11-trioxo-3,8,10-trioxa-9-stannatetradeca-5,12-dien-14-oate
27107-89-7	2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate
15571-58-1	bis(2-ethylhexan-1-yl) 2,2'-[(dioctan-1-ylstannanediyl)bis(sulfanediyl)]diacetate
33568-99-9	diisooctyl 4,4'-[(dioctylstannylene)bis(oxy)]bis[4-oxoisocrotonate]
3542-36-7	stannane, dichlorodiocytyl-
16091-18-2	dioctyltin maleate
870-08-6	dioctyltin oxide
22205-26-1	dioctylbis(stearoyloxy)stannane
3648-18-8	dioctyltin dilaurate
54068-28-9	dioctylbis(pentane-2,4-dionato-O,O')tin
68299-15-0	bis(neodecanoyloxy)dioctylstannane
93925-43-0	silicic acid (H4SiO4), tetraethyl ester, reaction products with bis(acetyloxy)dioctylstannane
10039-33-5	bis(2-ethane-1-ylhexan-1-yl) 4,4'-[(dioctan-1-ylstannylene)bisoxy]bis(4-oxobut-2-enoate)
AL54	dioctyl tin compounds
61947-30-6	diisobutyltin oxide
66779-19-9	dimethoxybis(pentane-2,4-dionato-O,O')tin
18253-54-8	tin, dichloro[29H,31H-phthalocyaninato(2-)-.kappa.N29,.kappa.N30,.kappa.N31,.kappa.N32]-, (OC-6-12)-

SubstanceGroup No./CAS No. etc	Substance Name
AL55	reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)
AL55	diorganotin compounds
AL56	Other organiostannic compounds
15	**beryllium and its compounds**
1302-52-9	beryl (Al2Be3(SiO3)6)
14874-86-3	beryllium diammonium tetrafluoride
7440-41-7	beryllium
12770-50-2	aluminium alloy, Al, Be
12536-51-5	beryllium diboride
12536-52-6	tetraberyllium boride
12228-40-9	beryllium diboride
12429-94-6	beryllium hexaboride
7787-46-4	beryllium dibromide
506-66-1	beryllium acetylide
13106-47-3	beryllium carbonate
66104-24-3	bis[carbonato-(2-)]dihydroxy-triberyllium
7787-47-5	beryllium chloride
543-81-7	beryllium di(acetate)
12323-05-6	beryllium fluoride
7787-49-7	beryllium fluoride
13327-32-7	beryllium hydroxide (Be(OH)2)
7787-53-3	beryllium diiodide
1304-54-7	triberyllium nitride
1304-56-9	beryllium oxide
13598-15-7	phosphoric acid, beryllium salt (1:1)
58127-61-0	beryllium phosphide
57620-29-8	beryllium phosphide (BeP2)
12232-25-6	beryllium selenide
13510-49-1	beryllium sulfate
7787-56-6	beryllium sulfate tetrahydrate
13598-22-6	beryllium sulphide
12232-27-8	beryllium telluride
25638-88-4	beryllium zinc silicate
39413-47-3	silicic acid, beryllium zinc salt
10210-64-7	bis(pentane-2,4-dionato-O,O')beryllium
542-63-2	diethylberyllium
13871-27-7	disodium tetrafluoroberyllate
19049-40-2	hexakis[mu-(acetato-O:O')]-mu4-oxotetraberyllium
35089-00-0	phosphoric acid, beryllium salt
13598-26-0	phosphoric acid, beryllium salt (2:3)
15191-85-2	beryllium orthosilicate
58500-38-2	silicic acid, beryllium salt
AL16	beryllium compounds
16	**asbestos**
77536-66-4	actinolite
12172-73-5	amosite
77536-67-5	anthophylite
12001-29-5	chrysotile
12001-28-4	crocidolite
77536-68-6	tremolite
1332-21-4	asbestos
13768-00-8	asbestos (actinolite)

SubstanceGroup No./CAS No. etc	Substance Name
14567-73-8	tremolite (Ca2[(Mg0.9-1Fe0-0.1)4.5-5Al0-0.5](Si7.5-8Al0-0.5)(OH)2O22)
17068-78-9	asbestos (anthophyllite)
12172-67-7	actinolite
132207-32-0	asbestos
132207-33-1	crocidolite
AL17	asbestos
17	**chrolinated flame retardants** **brominated flame retardants**
13560-89-9	1,4:7,10-dimethanodibenzo[a,e]cyclooctene, 1,2,3,4,7,8,9,10,13,13,14,14-dodecachloro-1,4,4a,5,6,6a,7,10,10a,11,12,12a-dodecahydro-
135821-74-8	1,4:7,10-dimethanodibenzo[a,e]cyclooctene, 1,2,3,4,7,8,9,10,13,13,14,14-dodecachloro-1,4,4a,5,6,6a,7,10,10a,11,12,12a-dodecahydro-
135821-03-3	1,4:7,10-dimethanodibenzo[a,e]cyclooctene, 1,2,3,4,7,8,9,10,13,13,14,14-dodecachloro-1,4,4a,5,6,6a,7,10,10a,11,12,12a-dodecahydro-
2052-07-5	2-bromobiphenyl
2113-57-7	3-bromobiphenyl
92-66-0	4-bromobiphenyl
40088-45-7	tetrabromobiphenyl
56307-79-0	pentabromobiphenyl
35194-78-6	polybrominated biphenyls (PBBs) & polybrominated diphenyl ethers (PBDEs) (heptabromobiphenyl)
27753-52-2	nonabromo-1,1'-biphenyl
68758-75-8	[1,1'-biphenyl]-ar,ar'-diol, tetrabromo-, polymer with (chloromethyl)oxirane and 4,4'-(1-methylethylidene)bis[phenol,]
73141-48-7	2,2',3,4',5'-pentabromobiphenyl
77910-04-4	2,2',3,4,6-pentabromobiphenyl
88700-05-4	2,2',3,5',6-pentabromobiphenyl
81397-99-1	2,2',4,4',5-pentabromobiphenyl
97038-97-6	2,2',4,4',6-pentabromobiphenyl
66115-57-9	2,2',4,4'-tetrabromobiphenyl
67888-96-4	2,2',4,5,5'-pentabromobiphenyl
59080-39-6	2,2',4,5',6-pentabromobiphenyl
80274-92-6	2,2',4,5,6'-pentabromobiphenyl
60044-24-8	2,2',4,5'-tetrabromobiphenyl
97063-75-7	2,2',4,6,6'-pentabromobiphenyl
97038-95-4	2,2',4,6'-tetrabromobiphenyl
59080-37-4	2,2',5,5'-tetrabromobiphenyl
60044-25-9	2,2',5,6'-tetrabromobiphenyl
59080-34-1	2,2',5-tribromobiphenyl
97038-96-5	2,2',6,6'-tetrabromobiphenyl
13029-09-9	2,2'-dibromobiphenyl
96551-70-1	2,3,4,4',5-pentabromobiphenyl
74114-77-5	2,3',4,4',5'-pentabromobiphenyl
84303-45-7	2,3',4,4'-tetrabromobiphenyl
38421-62-4	2,3,4,5,6-pentabromobiphenyl
59080-38-5	2,3',4',5-tetrabromobiphenyl
59080-35-2	2,3',5-tribromobiphenyl
49602-90-6	2,3'-dibromobiphenyl
64258-02-2	2,4,4',6-tetrabromobiphenyl
59080-36-3	2,4',5-tribromobiphenyl
59080-33-0	2,4,6-tribromobiphenyl
64258-03-3	2,4',6-tribromobiphenyl
49602-91-7	2,4'-dibromobiphenyl
53592-10-2	2,4-dibromobiphenyl
57422-77-2	2,5-dibromobiphenyl

SubstanceGroup No./CAS No. etc	Substance Name
59080-32-9	2,6-dibromobiphenyl
77102-82-0	3,3',4,4'-tetrabromobiphenyl
97038-98-7	3,3',4,5'-tetrabromobiphenyl
16400-50-3	3,3',5,5'-tetrabromobiphenyl
16400-51-4	3,3'-dibromobiphenyl
59589-92-3	3,4,4',5-tetrabromobiphenyl
57186-90-0	3,4'-dibromobiphenyl
60108-72-7	3,4-dibromobiphenyl
92-86-4	4,4'-dibromobiphenyl
83929-69-5	2,2',3,3',5,5',6,6'-octabromo-4-phenoxy-1,1'-biphenyl
14957-65-4	4,4',6,6'-tetrabromo[1,1'-biphenyl]-2,2'-diol
13654-09-6	perbromobiphenyl
59536-65-1	FireMaster BP 6
59080-40-9	2,2',4,4',5,5'-hexabromobiphenyl
67774-32-7	firemaster FF 1
36355-01-8	hexabromobiphenyl
27858-07-7	ar,ar,ar,ar,ar',ar',ar',ar'-octabromobiphenyl
61288-13-9	octabromobiphenyl
AL18	poly bromo biphenyl (PBB)
101-55-3	4-bromophenyl phenyl ether
2050-47-7	p,p'-dibromodiphenyl ether
49690-94-0	diphenyl ether, tribromo derivative
63936-56-1	pentabromo(tetrabromophenoxy)benzene
1163-19-5	decabromo-1,1'-oxybis(benzene)
32536-52-0	benzene, 1,1'-oxybis-, octabromo deriv.
32534-81-9	pentabromo(phenoxybenzene)
36483-60-0	hexabromo(phenoxybenzene)
68928-80-3	heptabromo(phenoxybenzene)
40088-47-9	tetrabromo(phenoxybenzene)
AL19	poly bromo diphenyl ethers (PBDE)
FR(14)	brominated flame retardant which comes under notation of iso 1043-4 code number FR(14) [aliphatic/alicyclic brominated compounds]
FR(15)	brominated flame retardant which comes under notation of iso 1043-4 code number FR(15) [aliphatic/alicyclic brominated compounds in combination with antimony compounds]
FR(16)	brominated flame retardant which comes under notation of iso 1043-4 code number FR(16) [aromatic brominated compounds (excluding brominated D/Phenyl ether and biphenyls)]
FR(17)	brominated flame retardant which comes under notation of iso 1043-4 code number FR(17) [aromatic brominated compounds (excluding brominated D/Phenyl ether and biphenyls) in combination with antimony compounds]
FR(22)	brominated flame retardant which comes under notation of iso 1043-4 code number FR(22) [aliphatic/alicyclic chlorinated and brominated compounds]
FR(42)	brominated flame retardant which comes under notation of iso 1043-4 code number FR(42) [brominated organic phosphorus compounds]
69882-11-7	phenol, 2,4(or 2,6)-dibromo-, homopolymer
58965-66-5	1,2,4,5-tetrabromo-3,6-bis(pentabromophenoxy)benzene
37853-59-1	benzene, 1,1'-[1,2-ethanediylbis(oxy)]bis[2,4,6-tribromo-
30496-13-0	phenol, 4,4'-(1-methylethylidene)bis-,tetrabromo deriv.

SubstanceGroup No./CAS No. etc	Substance Name
40039-93-8	epoxy resin intermediate (reaction products of 4,4'-(1-methylethylidene)bis(2,6-dibromophenol) and chloromethyloxirane)
70682-74-5	TBBA-TBBA-diglycidyl-ether oligomer
28906-13-0	carbonic dichloride, polymer with 4,4'-(1-methylethylidene)bis[2,6-dibromophenol]
94334-64-2	carbonic dichloride, polymer with 4,4'-(1-methylethylidene)bis[2,6-dibromophenol] and phenol
71342-77-3	carbonic dichloride, polymer with 4,4'-(1-methylethylidene)bis[2,6-dibromophenol], bis(2,4,6-tribromophenyl) ester
32844-27-2	carbonic dichloride, polymer with 4,4'-(1-methylethylidene)bis[2,6-dibromophenol] and 4,4'-(1-methylethylidene)bis[phenol]
139638-58-7	brominated epoxy resin end-capped with tribromophenol,
135229-48-0	brominated epoxy resin end-capped with tribromophenol,
21850-44-2	2,2-bis[3,5-dibromo-4-(2,3-dibromopropoxy)phenyl]propane
4162-45-2	2,2'-[(1-methylethylidene)bis[(2,6-dibromo-4,1-phenylene)oxy]]bis[ethanol]
25327-89-3	1,1'-isopropylidenebis[4-(allyloxy)-3,5-dibromobenzene]
37853-61-5	1,1'-(propane-2,2-diyl)bis(3,5-dibromo-4-methoxybenzene)
39635-79-5	4,4'-sulphonylbis[2,6-dibromophenol,]
42757-55-1	bis[3,5-dibromo-4-(2,3-dibromopropoxy)phenyl] sulphone
615-58-7	2,4-dibromophenol
118-79-6	2,4,6-tribromophenol
608-71-9	pentabromophenol
3278-89-5	2-(allyloxy)-1,3,5-tribromobenzene
26762-91-4	(allyloxy)tribromobenzene
79-27-6	1,1,2,2-tetrabromoethane
87-82-1	hexabromobenzene
55481-60-2	bis(methyl)tetrabromo-phtalate
26040-51-7	phthalic acid, 3,4,5,6-tetrabromo-, bis(2-ethylhexyl) ester
20566-35-2	2-(2-hydroxyethoxy)ethyl 2-hydroxypropyl 3,4,5,6-tetrabromophthalate
75790-69-1	TBPA, glycol-anD/Propylene-oxide esters
32588-76-4	1H-isoindole-1,3(2H)-dione, 2,2'-(1,2-ethanediyl)bis[4,5,6,7-tetrabromo-
52907-07-0	N,N'-(ethylene)bis[4,5-dibromohexahydro-3,6-methanophthalimide]
3234-02-4	2,3-dibromo-2-butene-1,4-diol
3296-90-0	2,2-bis(bromomethyl)propane-1,3-diol
96-13-9	2,3-dibromopropan-1-ol
36483-57-5	3-bromo-2,2-bis(bromomethyl)propan-1-ol
57137-10-7	poly(tribromostyrene)
61368-34-1	tribromostyrene
171091-06-8	benzene, ethenyl-, ar-bromo derivs., polymers with propene, graft
31780-26-4	dibromostyrene
68955-41-9	alkanes, C10-18, bromo chloro
82600-56-4	bromo-/chloro-alpha-olefin
593-60-2	bromoethylene
52434-90-9	1,3,5-tris(2,3-dibromopropyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione
49690-63-3	tris(dibromophenyl) phosphate
19186-97-1	tris[3-bromo-2,2-bis(bromomethyl)propan-1-yl] phosphate
125997-20-8	phosphoric acid, mixed 3-bromo-2,2-dimethylpropyl and 2-bromoethyl and 2-chloroethyl esters
87-83-2	2,3,4,5,6-pentabromotoluene
38521-51-6	2,3,4,5,6,alpha-hexabromotoluene
68441-46-3	1,3-butadiene, homopolymer, brominated
59447-55-1	(pentabromophenyl)methyl acrylate
59447-57-3	2-propenoic acid, (2,3,4,5,6-pentabromophenyl)methyl ester, homopolymer
84852-53-9	1,1'-(ethane-1,2-diyl)bis[2,3,4,5,6-pentabromobenzene]
59789-51-4	1H-pyrrole-2,5-dione, 1-(2,4,6-tribromophenyl)-

SubstanceGroup No./CAS No. etc	Substance Name
31454-48-5	tetrabromocyclooctane
3322-93-8	1,2-dibromo-4-(1,2-dibromoethyl)cyclohexane
25357-79-3	disodium tetrabromophthalate
79-94-7	tetrabromobisphenol A
25637-99-4	hexabromocyclododecane(HBCDD)
3194-55-6	1,2,5,6,9,10-hexabromocyclododecane
4736-49-6	rel-(1R,2S,5R,6S,9R,10S)-1,2,5,6,9,10-hexabromocyclododecane
65701-47-5	rel-(1R,2S,5R,6S,9S,10R)-1,2,5,6,9,10-hexabromocyclododecane
134237-50-6	rel-(1R,2R,5S,6R,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane
134237-51-7	rel-(1R,2S,5R,6R,9R,10S)-1,2,5,6,9,10-hexabromocyclododecane
134237-52-8	rel-(1R,2R,5R,6S,9S,10R)-1,2,5,6,9,10-hexabromocyclododecane
138257-17-7	(1R,2R,5R,6S,9S,10S)-1,2,5,6,9,10-hexabromocyclododecane
138257-18-8	(1R,2R,5R,6S,9R,10S)-1,2,5,6,9,10-hexabromocyclododecane
138257-19-9	(1R,2S,5S,6R,9S,10S)-1,2,5,6,9,10-hexabromocyclododecane
169102-57-2	(1R,2S,5S,6S,9S,10R)-1,2,5,6,9,10-hexabromocyclododecane
678970-15-5	(1R,2R,5S,6R,9R,10S)-1,2,5,6,9,10-hexabromocyclododecane
678970-16-6	(1R,2S,5R,6S,9S,10S)-1,2,5,6,9,10-hexabromocyclododecane
678970-17-7	(1R,2R,5R,6S,9S,10R)-1,2,5,6,9,10-hexabromocyclododecane
632-79-1	phthalic anhydride, tetrabromo-
155613-93-7	1H-indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-, octabromo deriv.
99688-47-8	monomethyldibromoD/Phenylmethane
81161-70-8	monomethyldichloroD/Phenylmethane
79596-31-9	dodecabromoterphenyl
83929-80-0	undecabromoterphenyl
1762-84-1	4-bromo-p-terphenyl (1,1':4',1"-Terphenyl, 4-bromo-)
3282-24-4	2-bromo-p-terphenyl
75295-57-7	2-bromo-p-terphenyl
17788-94-2	4,4'-dibromo-p-terphenyl
1762-87-4	3-bromo-p-terphenyl
AL42	brominated flame retardants
18	**polychlorinated naphthalene**
90-13-1	1-chloronaphthalene
91-58-7	2-chloronaphthalene
1825-30-5	1,5-dichloronaphthalene
1825-31-6	1,4-dichloronaphthalene
2050-69-3	1,2-dichloronaphthalene
2050-72-8	1,6-dichloronaphthalene
2050-73-9	1,7-dichloronaphthalene
2050-74-0	1,8-dichloronaphthalene
2050-75-1	2,3-dichloronaphthalene
2065-70-5	2,6-dichloronaphthalene
2198-75-6	1,3-dichloronaphthalene
2198-77-8	2,7-dichloronaphthalene
25586-43-0	chloronaphthalene
28699-88-9	dichloronaphthalene
2437-54-9	1,4,6-trichloronaphthalene
2437-55-0	1,4,5-trichloronaphthalene
3432-57-3	1,4,5,8-tetrachloronaphthalene
6529-87-9	1,2,4,8-tetrachloronaphthalene
6733-54-6	1,2,4,5-tetrachloronaphthalene
17062-87-2	1,2,3,6,7,8-hexachloronaphthalene
20020-02-4	1,2,3,4-tetrachloronaphthalene
31604-28-1	1,3,5,8-tetrachloronaphthalene
34588-40-4	2,3,6,7-tetrachloronaphthalene
50402-51-2	1,2,4-trichloronaphthalene

SubstanceGroup No./CAS No. etc	Substance Name
50402-52-3	1,2,3-trichloronaphthalene
51570-43-5	1,3,5-trichloronaphthalene
51570-44-6	1,2,6-trichloronaphthalene
51570-45-7	1,2,4,6-tetrachloronaphthalene
53555-63-8	1,2,3,5-tetrachloronaphthalene
53555-64-9	1,3,5,7-tetrachloronaphthalene
53555-65-0	1,2,3,5,7-pentachloronaphthalene
55720-33-7	1,2,5-trichloronaphthalene
55720-34-8	1,2,7-trichloronaphthalene
55720-35-9	1,2,8-trichloronaphthalene
55720-36-0	1,3,6-trichloronaphthalene
55720-37-1	1,3,7-trichloronaphthalene
55720-38-2	1,3,8-trichloronaphthalene
55720-39-3	1,6,7-trichloronaphthalene
55720-40-6	2,3,6-trichloronaphthalene
55720-41-7	1,2,3,7-tetrachloronaphthalene
55720-42-8	1,3,6,7-Tetrachloronaphthalene
55720-43-9	1,4,6,7-tetrachloronaphthalene
58863-14-2	1,2,3,4,5,6,7-heptachloronaphthalene
58863-15-3	1,2,3,4,5,6,8-heptachloronaphthalene
58877-88-6	1,2,3,4,5,6-hexachloronaphthalene
67922-21-8	1,2,4,7-tetrachloronaphthalene
67922-22-9	1,2,5,6-tetrachloronaphthalene
67922-23-0	1,2,5,7-tetrachloronaphthalene
67922-24-1	1,2,6,8-tetrachloronaphthalene
67922-25-2	1,2,3,4,5-pentachloronaphthalene
67922-26-3	1,2,3,4,6-pentachloronaphthalene
67922-27-4	1,2,3,4,5,7-hexachloronaphthalene
90948-28-0	1,2,4,5,6,8-hexachloronaphthalene
103426-92-2	1,2,4,5,7,8-hexachloronaphthalene
103426-93-3	1,2,3,4,5,8-hexachloronaphthalene
103426-94-4	1,2,3,5,7,8-hexachloronaphthalene
103426-95-5	1,2,3,5,6,8-hexachloronaphthalene
103426-96-6	1,2,3,4,6,7-hexachloronaphthalene
103426-97-7	1,2,3,5,6,7-hexachloronaphthalene
149864-78-8	1,2,3,6-tetrachloronaphthalene
149864-79-9	1,2,6,7-tetrachloronaphthalene
149864-80-2	1,2,5,8-tetrachloronaphthalene
149864-81-3	1,2,3,8-tetrachloronaphthalene
149864-82-4	1,2,7,8-tetrachloronaphthalene
150205-21-3	1,2,3,7,8-pentachloronaphthalene
150224-15-0	1,3,6,8-tetrachloronaphthalene
150224-16-1	1,2,3,6,7-pentachloronaphthalene
150224-17-2	1,2,4,6,7-pentachloronaphthalene
150224-18-3	1,2,3,5,6-pentachloronaphthalene
150224-19-4	1,2,4,5,7-pentachloronaphthalene
150224-20-7	1,2,4,5,6-pentachloronaphthalene
150224-21-8	1,2,4,7,8-pentachloronaphthalene
150224-22-9	1,2,4,6,8-pentachloronaphthalene
150224-23-0	1,2,3,6,8-pentachloronaphthalene
150224-24-1	1,2,3,5,8-pentachloronaphthalene
150224-25-2	1,2,4,5,8-pentachloronaphthalene
2234-13-1	perchloronaphthalene
1335-88-2	tetrachloronaphthalene
1335-87-1	hexachloronaphthalene

SubstanceGroup No./CAS No. etc	Substance Name
32241-08-0	heptachloronaphthalene
70776-03-3	naphthalene, chloro derivatives
1321-65-9	trichloronaphthalene
1321-64-8	pentachloronaphthalene
AL20	polychloronaphthalene
19	**PCB/PCT**
16606-02-3	2,4',5-trichlorobiphenyl
2437-79-8	2,2',4,4'-tetrachlorobiphenyl
52663-72-6	2,3',4,4',5,5'-hexachlorobiphenyl
35065-27-1	2,4,5,2',4',5'-hexachlorobiphenyl
32598-13-3	3,3',4,4'-tetrachlorobiphenyl
32774-16-6	3,4,5,3',4',5'-hexachlorobiphenyl
12674-11-2	aroclor 1016
11104-28-2	aroclor 1221
11141-16-5	aroclor 1232
53469-21-9	PCB 1242
12672-29-6	PCB 1248
11097-69-1	PCB 1254
11096-82-5	aroclor 1260
28655-71-2	heptachlorobiphenyl
53742-07-7	nonachlorobiphenyl
25429-29-2	pentachlorobiphenyl
76253-60-6	dichloro[(dichlorophenyl)methyl]methylbenzene
1336-36-3	polychlorobiphenyls
31472-83-0	octachlorobiphenyl
61788-33-8	terphenyl, chlorinated
20	**chlorinate/paraffins**
AL22	short chain chlorinateD/Paraffins (C10-13, 48% chlorine)
85535-84-8	chloroalkane(C10-13)
108171-26-2	alkanes, C10-12, chloro
71011-12-6	alkanes, C12-13, chloro
85535-85-9	alkanes, C14-17, chloro
84082-38-2	alkanes, C10-21, chloro
64754-90-1	chlorinated polyethylene
63449-39-8	paraffin waxes and Hydrocarbon waxes, chloro
68920-70-7	alkanes, C6-18, chloro
85681-73-8	alkanes, C10-14, chloro
85536-22-7	alkanes, C12-14, chloro
84776-07-8	alkanes, C16-27, chloro
85049-26-9	alkanes, C16-35, chloro
68527-02-6	alkenes, C12-24, chloro
61788-76-9	alkanes, chloro
51990-12-6	alkanes, chloro; chloroparaffins
21	**azo dye/pigment forming specified amine compounds**
137-17-7	2,4,5-trimethylaniline
91-59-8	2-naphthylamine
119-90-4	3,3'-dimethoxybenzidine
91-94-1	3,3'-dichlorobiphenyl-4,4'-diyldiamine
119-93-7	3,3'-dimethylbenzidine
101-14-4	2,2'-dichloro-4,4'-methylenedianiline
101-77-9	4,4'-methylenedianiline
838-88-0	2,2'-dimethyl-4,4'-methylenedianiline
101-80-4	4,4'-oxydianiline
139-65-1	4,4'-sulfanediyldianiline
92-67-1	biphenyl-4-ylamine

SubstanceGroup No./CAS No. etc	Substance Name
106-47-8	4-chloroaniline
95-69-2	4-chloro-2-methylaniline
615-05-4	4-methoxy-1,3-phenylenediamine
95-80-7	4-methyl-1,3-phenylenediamine
99-55-8	2-methyl-5-nitroaniline
97-56-3	2-methyl-4-(2-tolyldiazenyl)aniline
90-04-0	2-methoxyaniline
95-53-4	o-toluidine
120-71-8	2-methoxy-5-methylaniline
60-09-3	4-(phenyldiazenyl)aniline
111-42-2	2,2'-iminodiethanol
109-89-7	diethylamin
108-18-9	2-propanamine, N-(1-methylethyl)-
124-40-3	dimethylamin
142-84-7	dipropylamine
111-92-2	dibutylamin
103-69-5	aniline, N-ethyl-
624-78-2	ethyl(methyl)amine
100-61-8	N-methylaniline
110-91-8	morpholin
110-89-4	piperidin
123-75-1	pyrrolidin
2113-61-3	[1,1'-biphenyl]-4-amine, hydrochloride
92-87-5	benzidine
36341-27-2	benzidine acetate
531-86-2	[[1,1'-biphenyl]-4,4'-diyl]diammonium sulphate
21136-70-9	benzidine sulphate
67632-50-2	benzidine, Ni(2+) salt
531-85-1	benzidine dihydrochloride
70146-07-5	[2,2'-dichloro[1,1'-biphenyl]-4,4'-diyl]diammonium sulphate
612-83-9	N,N'-(3,3'-Dichlorobiphenyl-4,4'-diyl)diammonium dichloride
612-82-8	4,4'-bi-o-toluidine dihydrochloride
27336-24-9	disodium 4,4'-diaminobiphenyl-2,2'-disulfonate
95-68-1	2,4-dimethylaniline
106-49-0	p-toluidine
62-53-3	aniline
8004-59-9	acid black 7
3567-65-5	disodium 7-hydroxy-8-[[4'-[[4-[[(p-tolyl)sulphonyl]oxy]phenyl]azo][1,1'-biphenyl]-4-yl]azo]naphthalene-1,3-disulphonate
1937-37-7	disodium 4-amino-3-[{4'-[(2,4-diaminophenyl)diazenyl]biphenyl-4-yl}diazenyl]-5-hydroxy-6-(phenyldiazenyl)naphthalene-2,7-disulfonate
2429-83-6	disodium 4-amino-3-[[4'-[(2,4-diamino-5-methylphenyl)azo][1,1'-biphenyl]-4-yl]azo]-5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate
3626-23-1	C.I. direct black 29, C.I.22580
2602-46-2	tetrasodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis[5-amino-4-hydroxynaphthalene-2,7-disulphonate]
2429-73-4	trisodium 5-amino-3-[[4'-[(7-amino-1-hydroxy-3-sulphonato-2-naphthyl)azo][1,1'-biphenyl]-4-yl]azo]-4-hydroxynaphthalene-2,7-disulphonate
3811-71-0	disodium 5-[[4'-[[2,4-diamino-5-[(4-sulphophenyl)azo]phenyl]azo][1,1'-biphenyl]-4-yl]azo]salicylate
2429-82-5	disodium 5-[[4'-[(7-amino-1-hydroxy-3-sulphonato-2-naphthyl)azo][1,1'-biphenyl]-4-yl]azo]salicylate

SubstanceGroup No./CAS No. etc	Substance Name
6360-54-9	disodium 5-[[4'-[[2,6-diamino-3-methyl-5-[(4-sulphonatophenyl)azo]phenyl]azo][1,1'-biphenyl]-4-yl]azo]-3-methylsalicylate
2429-81-4	tetrasodium 5-[[4'-[[2,6-diamino-3-[[8-hydroxy-3,6-disulphonato-7-[(4-sulphonato-1-naphthyl)azo]-2-naphthyl]azo]-5-tolyl]azo][1,1'-biphenyl]-4-yl]azo]salicylate
3476-90-2	disodium 5-[[4'-[[1-hydroxy-7-(phenylamino)-3-sulphonato-2-naphthyl]azo][1,1'-biphenyl]-4-yl]azo]salicylate
2893-80-3	disodium 5-[[4'-[[2,4-dihydroxy-3-[(4-sulphonatophenyl)azo]phenyl]azo][1,1'-biphenyl]-4-yl]azo]salicylate
16071-86-6	disodium [5-[[4'-[[2,6-dihydroxy-3-[(2-hydroxy-5-sulphophenyl)azo]phenyl]azo][1,1'-biphenyl]-4-yl]azo]salicylato(4-)]cuprate(2-)
3626-28-6	disodium 4-amino-5-hydroxy-3-[[4'-[(4-hydroxyphenyl)azo][1,1'-biphenyl]-4-yl]azo]-6-(phenylazo)naphthalene-2,7-disulphonate
4335-09-5	disodium 4-amino-5-hydroxy-6-[[4'-[(4-hydroxyphenyl)azo][1,1'-biphenyl]-4-yl]azo]-3-[(4-nitrophenyl)azo]naphthalene-2,7-disulphonate
5422-17-3	trisodium 5-[[4'-[[8-amino-1-hydroxy-7-[(p-nitrophenyl)azo]-3,6-disulphonato-2-naphthyl]azo]-4-biphenyl]azo]salicylate
2429-84-7	disodium 5-[[4'-[(2-amino-8-hydroxy-6-sulphonato-1-naphthyl)azo][1,1'-biphenyl]-4-yl]azo]salicylate
573-58-0	disodium 3,3'-(biphenyl-4,4'-diyldidiazene-2,1-diyl)bis(4-aminonaphthalene-1-sulfonate)
3530-19-6	disodium 8-[[4'-[(4-ethoxyphenyl)azo][1,1'-biphenyl]-4-yl]azo]-7-hydroxynaphthalene-1,3-disulphonate
6426-67-1	C.I. direct violet 22, trisodium salt
13164-93-7	disodium 5-[[4'-[[4,5-dihydro-3-methyl-5-oxo-1-(4-sulphonatophenyl)-1H-pyrazol-4-yl]azo][1,1'-biphenyl]-4-yl]azo]salicylate
2429-79-0	disodium 5-[[4'-[(1-amino-4-sulphonato-2-naphthyl)azo][1,1'-biphenyl]-4-yl]azo]salicylate
72-57-1	tetrasodium 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[5-amino-4-hydroxynaphthalene-2,7-disulphonate]
8014-91-3	hexasodium 5,5'-[(3,7-disulphonato-1,5-naphthylene)bis[azo(6-hydroxy-3,1-phenylene)azo[6(or 7)-sulphonato-4,1-naphthylene]azo[1,1'-biphenyl]-4,4'-diylazo]]bis(salicylate)
AL23	salts from 3,3'-dimethoxybenzidine
74220-10-3	dipotassium O,O'-(4,4'-diaminobiphenyl-3,3'-ylene)diglycollate
AL23	salts from 3,3'-dimethoxybenzidin
553-00-4	2-naphthylammoniumacetat
97-39-2	1,3-di-o-tolylguanidine
22	**azodyes that can form carcinogenic amines, selected**
12217-14-0	acid black 29
6358-80-1	trisodium 4-amino-5-hydroxy-3-[[4'-[[4-hydroxy-2-[(o-tolyl)amino]phenyl]azo][1,1'-biphenyl]-4-yl]azo]-6-[(4-sulphonatophenyl)azo]naphthalene-2,7-disulphonate
12219-01-1	acid black 131
12219-02-2	acid black 132
72827-68-0	C.I. acid black 209
97199-27-4	C.I. acid brown 415
2429-80-3	disodium 3-amino-4-[[4'-[[4-[[(p-tolyl)sulphonyl]oxy]phenyl]azo][1,1'-biphenyl]-4-yl]azo]naphthalene-2,7-disulphonate
5858-39-9	sodium 2-(4-(3-methyl-4-(phenylsulphonyloxy)phenylazo)phenylimino)-5-nitrobenzenesulphonate
5858-63-9	disodium 4-hydroxy-3-[(2-methoxyphenyl)azo]naphthalene-2,7-disulphonate
5858-30-0	C.I. acid red 24, C.I.16140

SubstanceGroup No./CAS No. etc	Substance Name
6441-93-6	disodium 5-(acetylamino)-4-hydroxy-3-[(o-tolyl)azo]naphthalene-2,7-disulphonate
3567-65-5	disodium 7-hydroxy-8-[[4'-[[4-[[(p-tolyl)sulphonyl]oxy]phenyl]azo][1,1'-biphenyl]-4-yl]azo]naphthalene-1,3-disulphonate
8006-06-2	C.I. acid red 104, C.I.26420
6459-94-5	disodium 8-[(3,3'-dimethyl-4'-{[4-(tosyloxy)phenyl]diazenyl}biphenyl-4-yl)diazenyl]-7-hydroxynaphthalene-1,3-disulfonate
8005-61-6	C.I. acid red 115, C.I.27200
6245-62-1	C.I. acid red 116, C.I.26660
90880-75-4	C.I. acid red 119:1
6548-30-7	disodium 8-[[3,3'-dimethoxy-4'-[[4-[[(p-tolyl)sulphonyl]oxy]phenyl]azo][1,1'-biphenyl]-4-yl]azo]-7-hydroxynaphthalene-1,3-disulphonate
6300-53-4	1-naphthalenesulfonic acid, 4-hydroxy-3-[2-[2-methyl-4-[2-(2-methylphenyl)diazenyl]phenyl]diazenyl]-, sodium salt (1:1)
6226-78-4	disodium 3-hydroxy-4-(4-phenylazo)phenylazo)naphthalene-2,7-disulphonate
8004-55-5	acid red 158
61901-41-5	acid red 167
6505-96-0	disodium 4-hydroxy-3-[(2-methoxyphenyl)azo]-5-[[(p-tolyl)sulphonyl]amino]naphthalene-2,7-disulphonate
6358-43-6	disodium 4-hydroxy-3-[(o-tolyl)azo]-5-[[(p-tolyl)sulphonyl]amino]naphthalene-2,7-disulphonate
6625-46-3	disodium 5-(acetylamino)-4-hydroxy-3-[(2-methoxyphenyl)azo]naphthalene-2,7-disulphonate
5421-66-9	2,4-bis(2,4-diamino-5-methyl-1-benzenazo)toluene
12221-66-8	C.I. basic red 42
68391-30-0	[7-hydroxy-8-[(2-methoxyphenyl)azo]-2-naphthyl]trimethylammonium chloride
118658-98-3	C.I. basic red 111
12227-67-7	solvent yellow 82
54060-92-3	2-[[(4-methoxyphenyl)methylhydrazono]methyl]-1,3,3-trimethyl-3H-indolium methyl sulphate
2429-83-6	disodium 4-amino-3-[[4'-[(2,4-diamino-5-methylphenyl)azo][1,1'-biphenyl]-4-yl]azo]-5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate
3636-23-1	C.I. direct black 29, C.I.22580
1937-37-7	disodium 4-amino-3-[{4'-[(2,4-diaminophenyl)diazenyl]biphenyl-4-yl}diazenyl]-5-hydroxy-6-(phenyldiazenyl)naphthalene-2,7-disulfonate
37372-50-2	2,7-Naphthalenedisulfonic acid, 4-amino-3-[2-[4'-[2-(2,4-diaminophenyl)diazenyl]-3,3'-dimethyl[1,1'-biphenyl]-4-yl]diazenyl]-5-hydroxy-6-(2-phenyldiazenyl)-, sodium salt (1:2)
2610-05-1	tetrasodium 6,6'-[(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[4-amino-5-hydroxynaphthalene-1,3-disulphonate]
2429-73-4	trisodium 5-amino-3-[[4'-[(7-amino-1-hydroxy-3-sulphonato-2-naphthyl)azo][1,1'-biphenyl]-4-yl]azo]-4-hydroxynaphthalene-2,7-disulphonate
2429-72-3	disodium 3-[[4'-[(6-amino-1-hydroxy-3-sulphonato-2-naphthyl)azo]-3,3'-dimethyl[1,1'-biphenyl]-4-yl]azo]-4-hydroxynaphthalene-1-sulphonate
2602-46-2	tetrasodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis[5-amino-4-hydroxynaphthalene-2,7-disulphonate]
2429-71-2	disodium 3,3'-[(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis(4-hydroxynaphthalene-1-sulphonate)
6428-98-4	C.I. direct blue 9, C.I.24155
4198-19-0	tetrasodium 3,3'-[(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[4,5-dihydroxynaphthalene-2,7-disulphonate]

SubstanceGroup No./CAS No. etc	Substance Name
4198-41-0	C.I. direct blue 10, C.I.24340
72-57-1	tetrasodium 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[5-amino-4-hydroxynaphthalene-2,7-disulphonate]
2429-74-5	tetrasodium 3,3'-[(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[5-amino-4-hydroxynaphthalene-2,7-disulphonate]
6420-09-3	trisodium 5-amino-4-hydroxy-3-[[4'-[(1-hydroxy-4-sulphonato-2-naphthyl)azo]-3,3'-dimethyl[1,1'-biphenyl]-4-yl]azo]naphthalene-2,7-disulphonate
2586-57-4	disodium 4-amino-5-hydroxy-6-[[4'-[(2-hydroxy-1-naphthyl)azo]-3,3'-dimethoxy[1,1'-biphenyl]-4-yl]azo]naphthalene-1,3-disulphonate
2150-54-1	tetrasodium 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[4,5-dihydroxynaphthalene-2,7-disulphonate]
6473-33-2	trisodium 4-hydroxy-3-[[4'-[(1-hydroxy-4-sulphonato-2-naphthyl)azo]-3,3'-dimethoxy[1,1'-biphenyl]-4-yl]azo]naphthalene-2,7-disulphonate
110735-25-6	direct blue 151
12222-02-5	direct blue 160
12235-72-2	C.I. direct blue 173
71838-51-2	disperse blue 192
6771-80-8	C.I. direct blue 215, C.I.24415
6420-22-0	trisodium 5-amino-3-[[4'-[(6-amino-1-hydroxy-3-sulphonato-2-naphthyl)azo]-3,3'-dimethyl[1,1'-biphenyl]-4-yl]azo]-4-hydroxynaphthalene-2,7-disulphonate
3811-71-0	disodium 5-[[4'-[[2,4-diamino-5-[(4-sulphophenyl)azo]phenyl]azo][1,1'-biphenyl]-4-yl]azo]salicylate
2586-58-5	disodium 5-[[4'-[[2,6-diamino-3-methyl-5-[(4-sulphonatophenyl)azo]phenyl]azo][1,1'-biphenyl]-4-yl]azo]salicylate
2429-82-5	disodium 5-[[4'-[(7-amino-1-hydroxy-3-sulphonato-2-naphthyl)azo][1,1'-biphenyl]-4-yl]azo]salicylate
2893-80-3	disodium 5-[[4'-[[2,4-dihydroxy-3-[(4-sulphonatophenyl)azo]phenyl]azo][1,1'-biphenyl]-4-yl]azo]salicylate
33363-87-0	disodium 5-[[4'-[[4-[[diamino[[3-[(2,4-diaminophenyl)azo]phenyl]azo]phenyl]azo]sulphonato-1-naphthyl]azo][1,1'-biphenyl]-4-yl]azo]salicylate
6360-29-8	trisodium 5-[[4'-[[4-[(4-amino-7-sulphonato-1-naphthyl)azo]-6-sulphonato-1-naphthyl]azo][1,1'-biphenyl]-4-yl]azo]salicylate
2429-81-4	tetrasodium 5-[[4'-[[2,6-diamino-3-[[8-hydroxy-3,6-disulphonato-7-[(4-sulphonato-1-naphthyl)azo]-2-naphthyl]azo]-5-tolyl]azo][1,1'-biphenyl]-4-yl]azo]salicylate
1324-87-4	C.I. direct brown 33, C.I.35520
4623-91-0	C.I. direct brown 51, C.I.31710
3476-50-2	C.I. direct brown 59, C.I.22345
8014-91-3	hexasodium 5,5'-[(3,7-disulphonato-1,5-naphthylene)bis[azo(6-hydroxy-3,1-phenylene)azo[6(or 7)-sulphonato-4,1-naphthylene]azo[1,1'-biphenyl]-4,4'-diylazo]]bis(salicylate)
6483-77-8	C.I. direct brown 79, C.I.30050
16071-86-6	disodium [5-[[4'-[[2,6-dihydroxy-3-[(2-hydroxy-5-sulphophenyl)azo]phenyl]azo][1,1'-biphenyl]-4-yl]azo]salicylato(4-)]cuprate(2-)
3626-29-7	C.I. direct brown 101, C.I.31740
6360-54-9	disodium 5-[[4'-[[2,6-diamino-3-methyl-5-[(4-sulphonatophenyl)azo]phenyl]azo][1,1'-biphenyl]-4-yl]azo]-3-methylsalicylate
64743-15-3	benzoic acid, 5-[2-[4'-[2-[2,6-diamino-3-methyl-5-[2-(4-sulfophenyl)diazenyl]phenyl]diazenyl]-3,3'-dimethyl[1,1'-biphenyl]-4-yl]diazenyl]-2-hydroxy-, sodium salt (1:2)

SubstanceGroup No./CAS No. etc	Substance Name
76930-14-8	direct brown 223
3626-28-6	disodium 4-amino-5-hydroxy-3-[[4'-[(4-hydroxyphenyl)azo][1,1'-biphenyl]-4-yl]azo]-6-(phenylazo)naphthalene-2,7-disulphonate
4335-09-5	disodium 4-amino-5-hydroxy-6-[[4'-[(4-hydroxyphenyl)azo][1,1'-biphenyl]-4-yl]azo]-3-[(4-nitrophenyl)azo]naphthalene-2,7-disulphonate
5422-17-3	trisodium 5-[[4'-[[8-amino-1-hydroxy-7-[(p-nitrophenyl)azo]-3,6-disulphonato-2-naphthyl]azo]-4-biphenyl]azo]salicylate
76012-70-9	C.I. direct green 8:1
72390-60-4	direct black-154
54579-28-1	C.I. direct orange 1, C.I.22370
6637-88-3	disodium 5-[[4'-[(2,6-diamino-3-methyl-5-sulphonatophenyl)azo]-3,3'-dimethyl[1,1'-biphenyl]-4-yl]azo]salicylate
2868-76-0	C.I. direct orange 7, C.I.23380
2429-79-0	disodium 5-[[4'-[(1-amino-4-sulphonato-2-naphthyl)azo][1,1'-biphenyl]-4-yl]azo]salicylate
6405-94-3	disodium 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[2,4-diamino-5-methylbenzenesulphonate]
6358-79-8	C.I. direct orange 108, C.I.29173
2429-84-7	disodium 5-[[4'-[(2-amino-8-hydroxy-6-sulphonato-1-naphthyl)azo][1,1'-biphenyl]-4-yl]azo]salicylate
992-59-6	disodium 3,3'-((3,3'-dimethyl(1,1'-biphenyl)-4,4'-diyl)bis(azo)bis(4-aminonaphthalene-1-sulphonate)
2868-75-9	disodium 3,3'-[(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis(4-aminonaphthalene-1-sulphonate)
2429-70-1	disodium 4-amino-3-[[4'-[(1-hydroxy-4-sulphonato-2-naphthyl)azo][1,1'-biphenyl]-4-yl]azo]naphthalene-1-sulphonate
1937-35-5	disodium 4-amino-3-[[4'-[(2-amino-8-hydroxy-6-sulphonatonaphthyl)azo][1,1'-biphenyl]-4-yl]azo]naphthalene-1-sulphonate
2769-07-5	C.I. direct red 17, C.I.22150
6406-01-5	C.I. direct red 21, C.I.23560
6448-80-2	C.I. direct red 22, C.I.23565
6420-44-6	trisodium 4-hydroxy-7-[[[[5-hydroxy-6-[(2-methoxyphenyl)azo]-7-sulphonato-2-naphthyl]amino]carbonyl]amino]-3-[(2-methyl-4-sulphonatophenyl)azo]naphthalene-2-sulphonate
3687-80-7	trisodium 4-[[6-[[[[6-[(o-anisyl)azo]-5-hydroxy-7-sulphonato-2-naphthyl]amino]carbonyl]amino]-1-hydroxy-3-sulphonato-2-naphthyl]azo]naphthalene-1-sulphonate
3617-80-7	C.I. direct red 26, C.I.29190
573-58-0	disodium 3,3'-(biphenyl-4,4'-diyldidiazene-2,1-diyl)bis(4-aminonaphthalene-1-sulfonate)
3530-19-6	disodium 8-[[4'-[(4-ethoxyphenyl)azo][1,1'-biphenyl]-4-yl]azo]-7-hydroxynaphthalene-1,3-disulphonate
6358-29-8	disodium 8-[[4'-[(4-ethoxyphenyl)azo]-3,3'-dimethyl[1,1'-biphenyl]-4-yl]azo]-7-hydroxynaphthalene-1,3-disulphonate
2302-97-8	disodium 8,8'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(7-hydroxynaphthalene-1-sulphonate)
6548-29-4	tetrasodium 4,4'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[3-aminonaphthalene-2,7-disulphonate]
6420-43-5	trisodium 4-hydroxy-7-[[[[5-hydroxy-7-sulphonato-6-[(o-tolyl)azo]-2-naphthyl]amino]carbonyl]amino]-3-[(2-methyl-4-sulphonatophenyl)azo]naphthalene-2-sulphonate
6598-56-7	disodium 4-amino-3-[[4'-[(2-amino-6-sulphonatonaphthyl)azo]-3,3'-dimethyl[1,1'-biphenyl]-4-yl]azo]naphthalene-2-sulphonate
6589-56-7	C.I. direct red 67, C.I.23505
8005-64-9	C.I. direct red 72, C.I.29200

SubstanceGroup No./CAS No. etc	Substance Name
2586-60-9	C.I. direct violet 1, C.I.22570
6472-95-3	C.I. direct violet 4, C.I.22555
2429-75-6	C.I. direct violet 12, C.I.22550
13478-92-7	C.I. direct violet 13, C.I.2480
6470-45-7	C.I. direct violet 21, C.I.23520
6426-67-1	C.I. direct violet 22, trisodium salt
6472-91-9	C.I. direct yellow 1, C.I.22250
6486-29-9	C.I. direct yellow 24, C.I.22010
6459-97-8	C.I. direct yellow 48, C.I.23660
12270-44-9	disperse orange 60
151126-94-2	C.I. disperse orange 149
61968-47-6	C.I. disperse red 151, C.I.26130
64426-35-3	disperse red 221
6300-37-4	4-[[p-(phenylazo)phenyl]azo]-o-cresol
67701-38-6	C.I. disperse yellow 7, C.I.26090
6250-23-3	p-[[p-(phenylazo)phenyl]azo]phenol
54077-16-6	C.I. disperse yellow 56
83929-90-2	C.I. disperse yellow 218
8003-87-0	disodium 5,5'-[thiobis(phenyleneazo)]disalicylate
1229-55-6	1-[(2-methoxyphenyl)azo]-2-naphthol
6368-72-5	n-ethyl-1-(4-(phenylazo)phenylazo)-2-naphthylamine
85-86-9	2-naphthalenol, 1-[[4-(phenylazo)phenyl]azo]-
85-83-6	1-(2-methyl-4-(2-methylphenylazo)phenylazo)-2-naphthol
4477-79-6	1-[[2,5-dimethyl-4-[(2-methylphenyl)azo]phenyl]azo]-2-naphthol
61813-90-9	C.I. solvent red 68
5413-75-2	sodium 6-hydroxy-5-(4-phenylazophenylazo)naphthalene-2,4-disulphonate
71819-51-7	C.I. solvent red 164
85203-90-3	2-naphthalenol, 1-[[2-methyl-4-[(2-methylphenyl)azo]phenyl]azo]-, ar-styrenated
4645-07-2	2,4-dihydro-4-[(2-methoxyphenyl)azo]-5-methyl-2-phenyl-3H-pyrazol-3-one
118685-33-9	Trisodium bis(6-(4-anisidino)-3-sulfonato-2-(3,5-dinitro-2-oxidophenylazo)-1-naphtholato)chromate(1-)
23	**radioactive substances**
AL44	radioactive substances
14596-10-2	americium-241
10045-97-3	cesium-137
10098-97-2	strontium-90
7440-07-5	plutonium
7440-14-4	radium （Ra)
10043-92-2	radon （Rn)
7440-29-1	thorium
1314-20-1	thorium dioxide
7440-61-1	uranium
AL44	uranium compounds
24	**antimony and its compounds**
7440-36-0	antimony
7803-52-3	antimony (stibine)
7783-70-2	antimony pentafluoride
7647-18-9	antimony pentachloride
1314-60-9	diantimony pentoxide
1315-04-4	diantimony pentasulphide
7783-56-4	antimony trifluoride
7790-44-5	antimony triiodide
10025-91-9	antimony trichloride

SubstanceGroup No./CAS No. etc	Substance Name
1345-04-6	antimony trisulfide
28300-74-5	dipotassium bis{mu-[(2R,3R)-2,3-di(oxido-kappaO)butanedioato-kappaO(1):kappaO(4)]}diantimonate(2-) trihydrate, stereoisomer
1309-64-4	diantimony trioxide
AL27	antimony compounds
25	**chromium and its compounds(except hexavalent chromium compounds)**
7440-47-3	chromium
1066-30-4	chromium triacetate
64093-79-4	neochromium
1308-38-9	chromium (III) oxide (Cr2O3)
1308-14-1	dichromium trioxide hydrate
AL29	chromium compounds
26	**selenium and its compounds**
7488-56-4	selenium disulfide
13718-59-7	barium selenite
7783-07-5	dihydrogen selenide
1310-32-3	iron selenide
10102-18-8	disodium selenite
15572-25-5	dithallium selenide
12640-89-0	selenium oxide
15025-89-5	bis(ethylselenyl)diiron tetranitrosyl (6CI)
12039-52-0	thallium selenide
593-79-3	dimethyl selenide
7446-34-6	selenium (selenium sulfide)
7783-08-6	selenic acid
7783-00-8	selenious acid
7782-49-2	selenium
7446-08-4	selenium dioxide
7783-79-1	selenium hexafluoride
1315-09-9	zinc selenide
AL31	selenium compounds
27	**nickel and its compounds**
84852-39-1	(2-ethylhexanoato-O)(isodecanoato-O)nickel
85508-45-8	(2-ethylhexanoato-O)(isononanoato-O)nickel
84852-38-0	(2-ethylhexanoato-O)(isooctanoato-O)nickel
85135-77-9	(2-ethylhexanoato-O)(neodecanoato-O)nickel
84852-36-8	(isodecanoato-O)(isononanoato-O)nickel
85166-19-4	(isodecanoato-O)(isooctanoato-O)nickel
85508-42-5	(isodecanoato-O)(neodecanoato-O)nickel
85508-46-9	(isononanoato-O)(isooctanoato-O)nickel
85551-28-6	(isononanoato-O)(neodecanoato-O)nickel
84852-35-7	(isooctanoato-O)(neodecanoato-O)nickel
93920-08-2	(neononanoato-O)(neoundecanoato-O)nickel
22484-07-7	[mu-[[1,1',1",1'"-[benzene-1,2,4,5-tetrayltetrakis(nitromethylidyne)]naphth-2-olato](4-)]]dinickel
65405-96-1	[mu-[carbonato(2-)-O:O']]dihydroxydinickel
47726-62-5	[[2,2'-(4,8-dichlorobenzo[1,2-d:4,5-d']bisoxazole-2,6-diyl)bis[4,6-dichlorophenol,ato]](2-)]nickel
33882-09-6	[[2,2'-thiobis[3-octylphenol,ato]](2-)-O,O',S]nickel
97404-22-3	[[N,N',N",N'"-[29H,31H-phthalocyaninetetrayltetrakis(sulphonylimino-3,1-phenylene)]tetrakis[3-oxobutyramidato]](2-)-N29,N30,N31,N32]nickel
97404-21-2	[[N,N',N"-[29H,31H-phthalocyaninetriyltris(sulphonylimino-3,1-phenylene)]tris[3-oxobutyramidato]](2-)-N29,N30,N31,N32]nickel
68025-13-8	diammonium nickel bis(hydrogen citrate)
68391-37-7	2,3-dihydroxypropyl (dihydrogen phosphate), nickel salt (1:1)

SubstanceGroup No./CAS No. etc	Substance Name
67952-69-6	nickel(2+) glycerol phosphate
18824-79-8	1,2-benzenedicarboxylic acid, 3,4,5,6-tetrabromo-, nickel(2+) salt (1:1)
72319-19-8	2,7-naphthalenedisulfonic acid, nickel(2+) salt (1:1)
7580-31-6	2-ethylhexanoic acid, nickel salt
71050-57-2	acetic acid, nickel(2+) salt (2:1), polymer with formaldehyde and 4-(1,1,3,3-tetramethylbutyl)phenol
207803-51-8	aluminum boron cobalt lithium nickel oxide
193214-24-3	aluminum cobalt lithium nickel oxide
12004-35-2	dialuminium nickel tetraoxide
12003-78-0	aluminum, compound with nickel (1:1)
79357-65-6	aluminum, triethyl-, reaction products with nickel(2+) 2-ethylhexanoate (1:2)
73892-02-1	antimony oxide (Sb2O3), solid soln. with nickel oxide (NiO) and titanium oxide (TiO2)
12035-52-8	antimony, compound with nickel (1:1)
12503-49-0	antimony, compound with nickel (1:3)
55868-93-4	benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, nickel(2+) salt (2:1)
52625-25-9	nickel 3,5-bis(tert-butyl-4-hydroxybenzoate (1:2)
14949-69-0	bis(1,1,1,5,5,5-hexafluoropentane-2,4-dionato-O,O')nickel
1295-35-8	bis(1,5-cyclooctadiene)nickel
85586-46-5	bis(1H-1,2,4-triazole-3-sulphonato-N2,O3)nickel
12794-26-2	bis(1-nitroso-2-naphtholato)nickel
79121-51-0	bis(4-benzoyl-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-onato-O,O')(2,2,4,4-tetramethyl-7-oxa-3,20-diazadispiro[5.1.11.2]henicosan-21-one-O21)nickel
69524-96-5	bis(4-benzoyl-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-onato-O,O')nickel
85026-81-9	bis(5-oxo-DL-prolinato-N1,O2)nickel
70824-02-1	bis(5-oxo-L-prolinato-N1,O2)nickel
13478-93-8	bis(butanedione dioximato)nickel
71957-07-8	bis(D-gluconato-O1,O2)nickel
52610-81-8	bis(diethyldithiocarbamato-S,S')nickel
14100-15-3	bis(quinolin-8-olato-N1,O8)nickel
52486-98-3	bis[(2-hydroxyethyl)dithiocarbamato-S,S']nickel
15843-91-1	bis[2-hydroxy-4-(octyloxy)benzophenonato]nickel
52486-99-4	bis[bis(2-hydroxyethyl)dithiocarbamato-S,S']nickel
84604-95-5	bis[di(3,5,5-trimethylhexyl)dithiocarbamato-S,S']nickel
85269-39-2	bis[N-(2,4-dimethoxyphenyl)-2,3-bis(hydroxyimino)butyramidato-N2,N3]nickel
76625-10-0	bis[N-(2-hydroxyethyl)-N-methylglycinato-N,O,on]nickel
12688-64-1	bismuth, compound with nickel (1:1)
67952-41-4	nickel(2+) dihydrogen bis[R-(R*,R*)]-tartrate
72152-45-5	nickelate(6-), [22-[[[3-[[4,5-dihydro-3-methyl-5-oxo-1-[3-sulfo-4-[2-[2-sulfo-4-[(2,5,6-trichloro-4-pyrimidinyl)amino]phenyl]ethenyl]phenyl]-1H-pyrazol-4-yl]azo]-4-sulfophenyl]amino]sulfonyl]-29H,31H-phthalocyanine-1,8,15-trisulfonato(8-)-N
182442-95-1 346417-97-8	cobalt lithium manganese nickel oxide cobalt lithium manganese nickel oxide
16337-84-1	carbonic acid, nickel salt
17237-93-3	carbonic acid, nickel(2+) salt (2:1)
99749-23-2	cassiterite, cobalt manganese nickel grey
67952-43-6	nickel dichlorate
18283-82-4	citric acid , ammonium nickel salt
68016-03-5	cobalt dimolybdenum nickel octaoxide
58591-45-0	cobalt nickel dioxide

SubstanceGroup No./CAS No. etc	Substance Name
94232-44-7	cobalt(2+) dinickel(2+) bis[2-hydroxypropane-1,2,3-tricarboxylate]
63427-32-7	bis(ethylenediamine-N,N')copper tetrakis(cyano-C)nickelate
51912-52-8	copper, compound with lanthanum and nickel (4:1:1)
3906-55-6	nickel bis(4-cyclohexylbutyrate)
99587-11-8	diammonium tetrachloronickelate(2-)
94232-84-5	dicobalt(2+) nickel(2+) bis[2-hydroxypropane-1,2,3-tricarboxylate]
12168-54-6	Iron nickel oxide(Fe2NiO4)
97435-21-7	diiron nickel zinc tetraoxide
83898-70-8	dimethoxy[29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]nickel
93983-68-7	dimethylhexanoic acid, nickel salt
13775-54-7	dinickel orthosilicate
19372-20-4	diphosphoric acid, nickel(2+) salt (1:?)
14448-18-1	dinickel diphosphate
13859-60-4	dipotassium tetrafluoronickelate(2-)
39049-81-5	dipotassium tris(cyano-C)nickelate(2-)
12175-27-8	dysprosium, compound with nickel (1:2)
71720-48-4	ethyl hydrogen sulphate, nickel(2+) salt
91697-41-5	fatty acids, C6-19-branched, nickel salts
84776-45-4	fatty acids, C8-18 and C18-unsatd., nickel salts
13877-20-8	hexaamminenickel(2+) bis[tetrafluoroborate(1-)]
4454-16-4	nickel bis(2-ethylhexanoate)
11133-76-9	nickel, metallic and alloys
84852-37-9	nickel bis(isononanoate)
12196-72-4	lanthanum, compound with nickel (1:5)
84144-92-3	leach residues, nickel-vanadium ore
12031-65-1	lithium nickel oxide(LiNiO2)
12673-58-4	molybdenum nickel oxide
61788-71-4	naphthenic acids, nickel salts
51818-56-5	neodecanoic acid, nickel salt
7440-02-0	nickel
52022-10-3	nickel [R(R*,R*)]-tartrate
14998-37-9	nickel acetate
6018-89-9	nickel compounds
51222-18-5	nickel acrylate
15699-18-0	diammonium nickel bis(sulphate)
27016-75-7	nickel arsenide
68610-24-2	nickel barium titanium primrose priderite
39819-65-3	nickel bis(benzenesulphonate)
18718-11-1	nickel bis(dihydrogen phosphate)
14507-36-9	nickel bis(phosphinate)
41476-75-9	nickel bis(piperidine-1-carbodithioate)
36026-88-7	nickel bisphosphinate
12619-90-8	nickel boride
12007-01-1	dinickel boride
12007-02-2	trinickel boride
12007-00-0	nickel boride (NiB)
13462-88-9	nickel bromide
7789-49-3	nickel bromide (NiBr2), trihydrate
12710-36-0	nickel carbide
3333-67-3	nickel carbonate
12612-55-4	nickel carbonyl
13463-39-3	nickel tetracarbonyl
37211-05-5	nickel chloride
557-19-7	nickel dicyanide
12068-61-0	nickel diarsenide

SubstanceGroup No./CAS No. etc	Substance Name
553-71-9	nickel dibenzoate
14550-87-9	nickel dibromate
36897-37-7	nickel dihydroxide hydrate
15521-65-0	nickel bis(dimethyldithiocarbamate)
13842-46-1	nickel dipotassium bis(sulphate)
13689-92-4	nickel dithiocyanate
10028-18-9	nickel difluoride
13940-83-5	nickel difluoride tetrahydrate
14332-34-4	nickel hydrogen phosphate
11113-74-9	nickel hydroxide
12054-48-7	nickel dihydroxide
12125-56-3	nickel hydroxide [Ni(OH)3]
27637-46-3	nickel isooctanoate
94275-78-2	nickel methacrylate
14216-75-2	nitric acid, nickel salt
13138-45-9	nickel nitrate
17861-62-0	nitrous acid, nickel(2+) salt
11099-02-8	nickel oxide
1313-99-1	nickel monoxide
1314-06-3	dinickel trioxide
12035-36-8	nickel dioxide
13637-71-3	nickel diperchlorate
12035-64-2	dinickel phosphide
14220-17-8	dipotassium (SP-4-1)-tetracyanidonickelate(2-)
15060-62-5	nickel selenate
1314-05-2	nickel selenide
12059-14-2	dinickel silicide
12035-57-3	nickel silicide (NiSi)
12201-89-7	nickel disilicide
12035-72-2	nickel sulfide
7786-81-4	sulfuric acid, nickel(2+) salt (1:1)
12259-56-2	nickel sulfide (Ni2S3)
16812-54-7	nickel sulphide
12142-88-0	nickel telluride
12035-38-0	nickel tin trioxide
12035-39-1	nickel titanium trioxide
12653-76-8	nickel titanium oxide
69011-05-8	nickel icosatitanium pentatriacontaoxide diwolframate
52502-12-2	nickel divanadium hexaoxide
70692-93-2	nickel zirconium trioxide
53199-85-2	nickel(1+), [1-[2-amino-4-(imino-.kappa.N)-5(4H)-thiazolylidene]-N-[1-[2-amino-4-(imino-.kappa.N)-5(4H)-thiazolylidene]-1H-isoindol-3-yl-.kappa.N]-1H-isoindol-3-aminato-.kappa.N2]-, chloride (1:1)
60700-37-0	nickel(2+) acrylate
52496-91-0	nickel(2+) methacrylate
85508-44-7	nickel(2+) neodecanoate
93920-10-6	nickel(2+) neononanoate
93920-09-3	nickel(2+) neoundecanoate
13001-15-5	nickel(2+) oleate
13654-40-5	nickel(2+) palmitate
10101-96-9	nickel(2+) selenite
21784-78-1	nickel(2+) silicate
7757-95-1	nickel(2+) sulphite
16083-14-0	nickel(2+) trifluoroacetate
68958-89-4	bis(ethane-1,2-diamine-N,N')nickel(2+) bis[bis(cyano-C)aurate(1-)]

SubstanceGroup No./CAS No. etc	Substance Name
71215-98-0	nickel(2+), bis(1,2-ethanediamine-.kappa.N1,.kappa.N2)-, dimethylbenzenesulfonate (1:2)
18972-69-5	nickel(2+), bis(1,2-propanediamine-.kappa.N1,.kappa.N2)-, bis(cyano-.kappa.C)aurate(1-) (1:2)
21264-77-7	bis(ethane-1,2-diamine)nickel(2+) sulphate
108818-89-9	nickel(2+), hexakis(1H-imidazole-.kappa.N3)-, (OC-6-11)-, 1,2-benzenedicarboxylate (1:1)
71215-97-9	nickel(2+), tris(1,2-ethanediamine-.kappa.N1,.kappa.N2)-, (OC-6-11)-, dimethylbenzenesulfonate (1:2)
68309-97-7	tris(4,7-diphenyl-1,10-phenanthroline-N1,N10)nickel(2+) bis[tetrafluoroborate(1-)]
38780-90-4	tris(4,7-diphenyl-1,10-phenanthroline-N1,N10)nickel(2+) dinitrate
67806-76-2	nickel, carbonate, hexaammine
51467-07-3	nickel(2+), hexaammine-, dihydroxide, (OC-6-11)- (9CI)
373-02-4	nickel di(acetate)
7718-54-9	nickel dichloride
7791-20-0	nickel(II)chloride
14708-14-6	nickel bis(tetrafluoroborate)
6283-67-6	nickel(II) fumarate
13462-90-3	nickel diiodide
85508-43-6	nickel(II) isodecanoate
29317-63-3	nickel(II) isooctanoate
13478-00-7	nickel compounds
10101-97-0	nickel(II) sulfate hexahydrate
70776-98-6	nickel, (2-ethylhexanoato-.kappa.O)(2,2,2-trifluoroacetato-.kappa.O)-
67763-27-3	(propan-2-ol)[[2,2'-thiobis[4-(1,1,3,3-tetramethylbutyl)phenolato]](2-)-O,O',S]nickel
39430-27-8	nickel carbonate hydroxide (Ni3(CO3)(OH)4) tetrahydrate
68133-84-6	[(2-amino-2-oxoethoxy)acetato(2-)]nickel
71889-22-0	[mu-(piperazine-N1:N4)]bis[3-[1-[(4,5,6,7-tetrachloro-1-oxo-1H-isoindol-3-yl)hydrazono]ethyl]quinoline-2,4(1H,3H)-dionato(2-)]dinickel
20437-10-9	[[1,1'-[1,2-phenylenebis(nitrilomethylidyne)]bis[2-naphtholato]](2-)-N,N',O,O']nickel
71215-73-1	nickel, [[2,2'-[methylenebis(thio-.kappa.S)]bis[acetato-.kappa.O]](2-)]-
16432-37-4	[[2,2'-sulphonylbis[4-(1,1,3,3-tetramethylbutyl)phenolato]](2-)-O1,O1',O2]nickel
27574-34-1	[[2,2'-thiobis[4-(1,1,3,3-tetramethylbutyl)phenolato]](2-)-O,O',S]nickel
42844-93-9	[1,3-dihydro-5,6-bis[[(2-hydroxy-1-naphthyl)methylene]amino]-2H-benzimidazol-2-onato(2-)-N5,N6,O5,O6]nickel
14055-02-8	[29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]nickel
90459-35-1	nickel, [29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, [[3-[(5-chloro-2,6-difluoro-4-pyrimidinyl)amino]phenyl]amino]sulfonyl sulfo derivs., sodium salts
93573-17-2	nickel, [29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, chlorosulfonyl derivs., reaction products with 2-[(4-aminophenyl)sulfonyl]ethyl hydrogen sulfate monosodium salt, potassium sodium salts, compds. with pyridine
28680-76-4	[29H,31H-phthalocyaninetetrasulphonyl tetrachloridato(2)-N29,N30,N31,N32]nickel
85958-80-1	[[3-[1-cyano-2-(methylamino)-2-oxoethylidene]-2,3-dihydro-1H-isoindol-1-ylidene](salicylic)hydrazidato(2-)]nickel
12334-31-5	nickel, carbonate, hexahydroxy tetrahydrate
71889-20-8	nickel, [N-(4-chlorophenyl)-3-[2-[[1-(4-chlorophenyl)-4,5-dihydro-3-methyl-5-(oxo-.kappa.O)-1H-pyrazol-4-yl]methylene]hydrazinylidene-.kappa.N2]-.alpha.-cyano-1H-isoindole-3-acetamidato(2-)-.kappa.N2,.kappa.O3]-

SubstanceGroup No./CAS No. etc	Substance Name
13869-33-5	[N-(carboxymethyl)glycinato(2-)-N,O,ON]nickel
72986-45-9	[N,N',N",N"'-tetrakis[4-(4,5-dihydro-3-methyl-5-oxo-1H-pyrazol-1-yl)phenyl]-29H,31H-phthalocyaninetetrasulphonamidato(2-)-N29,N30,N31,N32]nickel
72252-57-4	nickel, [N,N',N"-tris[4-(4,5-dihydro-3-methyl-5-oxo-1H-pyrazol-1-yl)phenyl]-29H,31H-phthalocyanine-C,C,C-trisulfonamidato(2-)-.kappa.N29,.kappa.N30,.kappa.N31,.kappa.N32]-
85480-75-7	nickel, 2,2'-thiobis[4-nonylphenol] complexes
90459-30-6	nickel, acetate carbonate C8-10-branched fatty acids C9-11-neofatty acids complexes
90459-34-0	nickel, acetylacetone 6-methyl-2,4-heptanedione complexes
106316-55-6	nickel, aqua[2-[2-[4,5-dihydro-3-methyl-5-(oxo-.kappa.O)-1H-pyrazol-4-yl]diazenyl-.kappa.N1]benzoato(2-)-.kappa.O]-
3264-82-2	bis(pentane-2,4-dionato-O,O')nickel
68912-08-3	bis(2-heptadecyl-1H-imidazole-N3)bis(octanoato-O)nickel
70833-37-3	bis(3-amino-4,5,6,7-tetrachloro-1H-isoindol-1-one oximato-N2,O1)nickel
13927-77-0	nickel bis(dibutyldithiocarbamate)
14267-17-5	bis(diethyldithiocarbamato-S,S')nickel
85298-61-9	nickel, bis(diisononylcarbamodithioato-,')-
36259-37-7	bis(dipentyldithiocarbamato-S,S')nickel
36545-21-8	nickel, bis[(2-phenyldiazenecarbothioic acid-.kappa.S) 2-phenylhydrazidato-.kappa.N2]-
68189-15-1	nickel, bis[[2-(hydroxy-.kappa.O)-4-octylphenyl]phenylmethanonato-.kappa.O]-
83864-02-2	nickel, bis[(cyano-.kappa.C)triphenylborato(1-)-.kappa.N]bis(hexanedinitrile-.kappa.N,.kappa.N')-
77245-35-3	nickel, bis[[didecyl (1,2-dicyano-1,2-ethenediyl)bis[carbamato]](2-)]-
38951-97-2	bis[4,4'-dimethoxy-alpha,alpha'-stilbenedithiolato(2-)]nickel
28984-20-5	bis[stilbene-alpha,beta-dithiolato(2-)]nickel
51449-18-4	nickel, bis[1-[4-(diethylamino)phenyl]-2-phenyl-1,2-ethenedithiolato(2-)-.kappa.S1,.kappa.S2]-
38465-55-3	bis[1-[4-(dimethylamino)phenyl]-2-phenylethylene-1,2-dithiolato(2-)-S,S']nickel
42739-61-7	bis[2,3-bis(hydroxyimino)-N-(2-methoxyphenyl)butyramidato]nickel
29204-84-0	bis[2,3-bis(hydroxyimino)-N-phenylbutyramidato-N2,N3]nickel
56557-00-7	bis[2,4-dihydro-5-methyl-4-(1-oxodecyl)-2-phenyl-3H-pyrazol-3-onato-O,O']nickel
38951-94-9	bis[2-butene-2,3-dithiolato(2-)-S,S']nickel
51931-46-5	bis[3-[(4-chlorophenyl)azo]quinoline--2,4(1H,3H)-dionato]nickel
15317-78-9	bis(diisobutyldithiocarbamato)nickel
71605-83-9	nickel, bis[N-hydroxy-3-(hydroxyimino-.kappa.N)-N'-(2-methoxyphenyl)butanimidamidato-.kappa.N']-
90459-31-7	nickel, borate C8-10-branched carboxylate complexes
92502-55-1	nickel, borate neodecanoate complexes
93573-15-0	nickel, C4-10 fatty acids naphthenate complexes
93573-16-1	nickel, C4-10 fatty acids octanoate complexes
93762-59-5	nickel, C5-23-branched carboxylate C4-10 fatty acids complexes
93573-14-9	nickel, C5-23-branched carboxylate C4-10-fatty acids naphthenate complexes
92200-98-1	nickel, C5-23-branched carboxylate naphthenate complexes
92200-99-2	nickel, C5-25-branched carboxylate naphthenate octanoate complexes
90459-32-8	nickel, C5-C23-branched carboxylate octanoate complexes
12034-55-8	nickel, compound with niobium (1:1)
12059-23-3	nickel, compound with tin (3:1)
12142-92-6	nickel, compound with zirconium (1:2)

SubstanceGroup No./CAS No. etc	Substance Name
85585-97-3	nickel, isodecanoate naphthenate complexes
85585-98-4	nickel, isononanoate naphthenate complexes
90459-33-9	nickel, isooctanoate naphthenate complexes
85585-99-5	nickel, naphthenate neodecanoate complexes
14221-00-2	nickel, tetrakis(triphenyl phosphite-.kappa.P)-, (T-4)-
79745-01-0	nickel,[6,8,16,18-tetrachloro-1,11-bis(2-furanylmethyl)-1,10,11, 20-tetrahydrodibenzo[c,j]D/Pyrazolo[3,4-f:3',4'-m][1,2,5,8,9,12] exaazacyclotetradecinato(2-)-N5,N10,N15,N20]-
67906-12-1	potassium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']nickelate(1-)
61300-98-9	hydrogen [3,4-bis[[(2-hydroxy-1-naphthyl)methylene]amino]benzoato(3-)-N3,N4,O3,O4]nickelate(1-)
34831-03-3	hydrogen [N,N-bis(carboxymethyl)glycinato(3-)-N,O,O',O'']nickelate(1-)
24640-21-9	ammonium nickel trichloride
25481-21-4	dihydrogen [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']nickelate(2-)
71243-96-4	trisodium [22-[[[3-[(5-chloro-2,6-difluoro-4-pyrimidinyl)amino]phenyl]amino]sulphonyl]-29H,31H-phthalocyanine-1,8,15-trisulphonato(5-)-N29,N30,N31,N32]nickelate(3-)
79817-91-7	trisodium [5-[(4,5-dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-4-yl)azo]-4-hydroxy-3-[(2-hydroxy-3-nitro-5-sulphophenyl)azo]naphthalene-2,7-disulphonato(5-)]nickelate(3-)
72229-81-3	trisodium [[[[3-[(4-amino-6-chloro-1,3,5-triazin-2-yl)amino]phenyl]amino]sulphonyl]tris(aminosulphonyl)-29H,31H-phthalocyaninetrisulphonato(5-)-N29,N30,N31,N32]nickelate(3-)
68025-40-1	triammonium [N,N-bis(phosphonomethyl)glycinato(5-)]nickelate(3-)
63597-34-2	tripotassium [N,N-bis(phosphonomethyl)glycinato(5-)]nickelate(3-)
68025-41-2	trisodium [N,N-bis(phosphonomethyl)glycinato(5-)]nickelate(3-)
63588-33-0	tetrapotassium [[[nitrilotris(methylene)]tris[phosphonato]](6-)]nickelate(4-)
68052-00-6	tetrasodium [[[nitrilotris(methylene)]tris[phosphonato]](6-)-N,O,O'',O'''nickelate(4-)]
67968-22-3	triammonium hydrogen [[[nitrilotris(methylene)]tris[phosphonato]](6-)]nickelate(4-)
70729-79-2	nickelate(4-), [22-[[(4-sulfophenyl)amino]sulfonyl]-29H,31H-phthalocyanine-1,8,15-trisulfonato(6-)-.kappa.N29,.kappa.N30,.kappa.N31,.kappa.N32]-, hydrogen (1:4), (SP-4-2)-
90459-36-2	nickelate(4-), [bis[[[3-[[4,5-dihydro-3-methyl-5-oxo-1-[4-[[2-(sulfooxy)ethyl]sulfonyl]phenyl]-1H-pyrazol-4-yl]azo]phenyl]amino]sulfonyl]-29H,31H-phthalocyaninedisulfonato(6-)-N29,N30,N31,N32]-, sodium
93891-86-2	nickelate(6-), [4-[[5-[[(3,6-dichloro-4-pyridazinyl)carbonyl]amino]-2-sulfophenyl]azo]-4,5-dihydro-5-oxo-1-[2-sulfo-5-[[(trisulfo-29H,31H-phthalocyaninyl)sulfonyl]amino]phenyl]-1H-pyrazole-3-carboxylato(8-)-N29,N30,N31,N32]-, hexasodium
68698-80-6	nickelate(6-), [4-[[5-[[(3,6-dichloro-4-pyridazinyl)carbonyl]amino]-2-sulfophenyl]azo]-4,5-dihydro-5-oxo-1-[5-[[(trisulfo-29H,31H-phthalocyaninyl)sulfonyl]amino]-2-sulfophenyl]-1H-pyrazole-3-carboxylato(8-)-N29,N30,N31,N32]-,hexahydrogen
72453-55-5	nickelate(6-), [C-[[[3-[2-[4,5-dihydro-3-methyl-5-oxo-1-[3-sulfo-4-[2-[2-sulfo-4-[(2,5,6-trichloro-4-pyrimidinyl)amino]phenyl]ethenyl]phenyl]-1H-pyrazol-4-yl]diazenyl]-4-sulfophenyl]amino]sulfonyl]-29H,31H-phthalocyanine-C,C,C-trisulfonato(8-)-.kappa.N29,.kappa.N30,.kappa.N31,.kappa.N32]-, sodium (1:6)
68958-86-1	pentaammonium hydrogen [[[ethylenebis[nitrilobis(methylene)]]tetrakis[phosphonato]](8-)]nickelate(6-)

SubstanceGroup No./CAS No. etc	Substance Name
68958-87-2	hydrogen pentapotassium [[[ethylenebis[nitrilobis(methylene)]]tetrakis[phosphonato]](8-)]nickelate(6-)
68958-88-3	hydrogen pentasodium [[[ethylenebis[nitrilobis(methylene)]]tetrakis[phosphonato]](8-)]nickelate(6-)
72139-08-3	dihydrogen hexasodium bis[3-[(2-amino-8-hydroxy-6-sulpho-1-naphthyl)azo]-2-hydroxy-5-sulphobenzoato(5-)]nickelate(8-)
1271-28-9	bis(eta5-2,4-cyclopentadien-1-yl)nickel
2223-95-2	nickel(2+) stearate
4995-91-9	nickel(2+) octanoate
20543-06-0	oxalic acid, nickel salt
13520-61-1	nickel diperchlorate hexahydrate
30947-30-9	nickel(2+) diethyl bis[[[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]phosphonate]
17169-61-8	phosphoric acid, calcium nickel salt (1:?:?)
10381-36-9	phosphoric acid, nickel(2+) salt (2:3)
63640-18-6	potassium [N,N-bis(carboxymethyl)glycinato(3-)-N,O,O',O"]nickelate(1-)
1303-22-6	rammelsbergite (NiAs2)
31748-25-1	nickel silicate(3:4)
95046-47-2	spinels, cobalt nickel zinc grey
13770-89-3	nickel bis(sulphamidate)
7785-20-8	nickel compounds
72162-32-4	sulfuric acid, nickel salt (1:?), reaction products with sulfurized phenol calcium salt (2:1)
10101-98-1	nickel compounds
68585-48-8	sulfuric acid, nickel(2+) salt (1:1), reaction products with nickel and nickel oxide (NiO)
15851-52-2	nickel tellurium trioxide
15852-21-8	nickel tellurium tetraoxide
79102-62-8	tetrahydrogen [[[(3-amino-4-sulphophenyl)amino]sulphonyl]-29H,31H-phthalocyaninetrisulphonato(6-)-N29,N30,N31,N32]nickelate(4-)
93939-76-5	tetrasodium [[[(3-amino-4-sulphophenyl)amino]sulphonyl]-29H,31H-phthalocyaninetrisulphonato(6-)-N29,N30,N31,N32]nickelate(4-)
97280-68-7	tetrasodium [bis[[[4-[[2-(sulphooxy)ethyl]sulphonyl]phenyl]amino]sulphonyl]-29H,31H-phthalocyaninedisulphonato(6)-N29,N30,N31,N32]nickelate(4-)
34109-80-3	titanate(2-), hexafluoro-, nickel(2+), (1:1), (OC-6-11)-
13477-70-8	trinickel bis(arsenate)
198831-12-8	Aluminiummagnesiumnickelsiliziumoxide
8007-18-9	C.I. pigment yellow 53
12645-50-0	iron nickel zinc oxide
14406-71-4	nickel, [[2,2'-[1,2-phenylenebis[(nitrilo-.kappa.N)methylidyne]]bis[phenolato-.kappa.O]](2-)]-
68511-62-6	nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes
71631-15-7	nickel iron chromite black spinel
68611-43-8	nickel niobium titanium yellow rutile
14396-43-1	phosphoric acid, nickel(2+) salt (2:3)
11113-75-0	nickel sulfide
90053-13-7	phosphoric acid,compounds,nickel(2+) zinc salt (2:1:2)
501953-51-1	phosphoric acid,compounds,nickel(2+) zinc salt (2:1:2) tetrahydrate
AL34	nickel compounds
28	**arsenic and its compounds**
2321-53-1	monoammonium methane arsonate
75-60-5	dimethylarsinic acid
98-05-5	phenylarsonic acid
7784-36-3	pentafluoroarsorane
22441-45-8	arsenic pentachloride

SubstanceGroup No./CAS No. etc	Substance Name
1303-32-8	monoarsenic monosulfide
84282-36-0	2,6-dimethyl-4-(1-naphthyl)pyrylium hexafluoroarsenate
84304-15-4	2,6-dimethyl-4-phenylpyrylium hexafluoroarsenate
84304-16-5	4-cyclohexyl-2,6-dimethylpyrylium hexafluoroarsenate
139-93-5	6,6'-dihydroxy-3,3'-diarsene-1,2-diyldianilinium dichloride
22831-42-1	aluminium arsenide
37382-15-3	aluminum gallium arsenide ((Al,Ga)As)
7784-44-3	diammonium hydrogenarsenate
14644-70-3	ammonium-magnesium-arsenat
28980-47-4	antimony arsenate
64475-90-7	antimony arsenic oxide
12255-36-6	triantimony arsenide
12417-99-1	trisilver arsenide
17068-85-8	hydrogen hexafluoroarsenate
29935-35-1	lithium hexafluoroarsenate
17029-22-0	potassium hexafluoroarsenate
72845-34-2	arsenenous acid, lithium salt (1:1)
1327-52-2	arsenic acid
7778-39-4	arsenic acid
32680-29-8	ammonium copper arsenate
13477-04-8	tribarium diarsenate
13702-38-0	arsenic acid (H3AsO4), bismuth salt (1:1)
24719-19-5	tricobalt diarsenate
10103-61-4	arsenic acid, copper salt
7778-41-8	arsenic acid (H3AsO4), copper(2+) salt (2:3)
21093-83-4	arsenic acid (H3AsO4), D/Potassium salt
102110-21-4	arsenic acid (H3AsO4), magnesium salt, manganese-doped
13462-93-6	ammonium dihydrogenarsenate
13464-68-1	tristrontium diarsenate
13478-14-3	trilithium arsenate
13510-44-6	trisilver arsenate
53404-12-9	arsenic acid, lead (4+) salt
13464-38-5	trisodium arsenate
64973-06-4	arsenic bromide
7784-33-0	arsenic tribromide
37226-49-6	arsenic chloride
12044-79-0	arsenic sulfide (AsS)
56320-22-0	arsenic sulfide (AsS2)
1303-28-2	diarsenic pentaoxide
1303-36-2	diarsenic triselenide
12612-21-4	arsenic sulfide
12344-68-2	arsenic sulfide (As2S4)
12044-54-1	diarsenic tritelluride
60646-36-8	arsenic trichloride
1327-53-3	diarsenic trioxide
1303-33-9	diarsenic(III) tris(sulfide)
7440-38-2	arsenic, elemental
12414-94-7	arsenopyrite, cobaltoan
13464-37-4	trisodium arsenite
7784-34-1	arsenic trichloride
7784-45-4	arsenic triiodide
12255-50-4	tribarium diarsenide
27569-09-1	3-methyl-4-(pyrrolidin-1-yl)benzenediazonium hexafluoroarsenate
63217-33-4	4-(diethylamino)-2-ethoxybenzenediazonium hexafluoroarsenate
63217-32-3	4-(ethylamino)-2-methylbenzenediazonium hexafluoroarsenate

SubstanceGroup No./CAS No. etc	Substance Name
71130-51-3	benzenesulfonic acid, 4-arsenoso-
71130-50-2	benzenesulfonic acid, 4-arsenoso-, sodium salt (1:1)
68892-01-3	bis(pentane-2,4-dionato-O,O')boron(1+) hexafluoroarsenate(1-)
10103-62-5	arsenic acid, calcium salt
7778-44-1	calcium bis(arsenate)
12255-53-7	tricalcium diarsenide
52740-16-6	calcium arsenite
15194-98-6	arsenenous acid, calcium salt (2:1)
27152-57-4	tricalcium diarsenite
27016-73-5	cobalt arsenide
12044-42-7	cobalt arsenide (CoAs2)
12256-04-1	cobalt arsenide (CoAs3)
12002-03-8	C.I. pigment Green 21
29871-13-4	arsenic acid, copper(2+) salt
12774-48-0	copper arsenate hydroxide (Cu2(AsO4)(OH))
12005-75-3	tricopper arsenide
10290-12-7	copper arsonate
33382-64-8	copper arsenite
16509-22-1	copper diarsenite
13453-15-1	diarsenic acid
4519-32-8	diphenyldiarsenic acid
10048-95-0	disodium arsenate heptahydrate
7778-43-0	disodium hydrogen arsenate
12005-81-1	dysprosium arsenide
12254-88-5	erbium arsenide (ErAs)
32775-46-5	europium arsenide (EuAs)
10102-49-5	iron arsenate
63989-69-5	iron (III)-o-arsenite, pentahydrate
10102-50-8	iron bis(arsenate)
12005-89-9	gadolinium arsenide (GdAs)
1303-00-0	gallium arsenide
106097-61-4	gallium arsenide phosphide (GaAs0.08P0.92)
12044-20-1	digallium arsenide phosphide
98106-56-0	gallium zinc triarsenide
12271-72-6	germanium arsenide (GeAs)
12005-92-4	holmium arsenide (HoAs)
1303-11-3	indium arsenide (InAs)
62613-15-4	diphenyliodonium hexafluoroarsenate
12005-88-8	diiron arsenide
12044-16-5	iron arsenide (FeAs)
12006-21-2	Iron diarsenide
12255-04-8	lanthanum arsenide (LaAs)
12044-22-3	trilithium arsenide
12005-94-6	lutetium arsenide (LuAs)
10103-50-1	arsenic acid, magnesium salt
12044-49-4	trimagnesium diarsenide
12005-96-8	manganese arsenide (Mn2As)
12005-95-7	manganese arsenide (MnAs)
7784-38-5	manganese hydrogenarsenate
10102-53-1	arsenenic acid
437-15-0	tritylium hexafluoroarsenate
21840-08-4	N-(p-arsenosophenyl)-1,3,5-triazine-2,4,6-triamine
12255-09-3	neodymium arsenide (NdAs)
27016-75-7	nickel arsenide
12068-61-0	nickel diarsenide

SubstanceGroup No./CAS No. etc	Substance Name
12255-08-2	niobium arsenide (NbAs)
12044-52-9	platinum arsenide (PtAs2)
7784-41-0	potassium dihydrogenarsenate
12044-21-2	tripotassium arsenide
10124-50-2	potassium arsonate (AsH3O3.xK)
13464-35-2	potassium arsenite (AsKO2)
12044-28-9	praseodymium arsenide (PrAs)
12255-39-9	samarium arsenide (SmAs)
68957-75-5	silicic acid (H4SiO4), tetraethyl ester, polymer with arsenic oxide(As2O3)
67251-38-1	tris(pentane-2,4-dionato-O,O')silicon hexafluoroarsenate
70333-07-2	disilver arsenide
7631-89-2	arsenic acid, sodium salt
12044-25-6	trisodium arsenide
7784-46-5	sodium dioxoarsenate
15120-17-9	sodium metaarsenate
39297-24-0	tristrontium diarsenide
15195-06-9	strontium arsenite
91724-16-2	strontium arsenite (Sr(As2O4))
100258-44-4	strychnidin-10-one, arsenite (1:1)
10476-82-1	strychnine arsenate
57900-42-2	triphenylsulphonium hexafluoroarsenate(1-)
12006-08-5	terbium arsenide (TbAs)
12006-09-6	thallium arsenide (TlAs)
84057-85-2	thallium triarsenide
12006-10-9	thulium arsenide (TmAs)
24719-13-9	triammonium arsenate
15606-95-8	triethyl arsenate
3141-12-6	triethyl arsenite
61219-26-9	trimanganese arsenide
13477-70-8	trinickel bis(arsenate)
94138-87-1	tris[(8alpha)-6'-methoxycinchonan-9(R)-ol] arsenite
549-59-7	tris[(8alpha,9R)-6'-methoxycinchonan-9-ol] bis(arsenate)
99035-51-5	vanadium(4+) diarsenate (1:1)
12006-12-1	ytterbium arsenide (YbAs)
12255-48-0	yttrium arsenide (YAs)
1303-39-5	pentazinc(II) trioxide tetrakis[trioxidoarsenate(1-)] tetrahydrate
13464-44-3	trizinc(II) bis(arsenate)
12006-40-5	trizinc diarsenide
12044-55-2	zinc diarsenide
10326-24-6	zinc arsenite
60909-47-9	zirconium arsenide (ZrAs)
13464-58-9	arsorous acid
7784-42-1	arsin
58-36-6	diphenoxarsin-10-yl oxide
7784-08-9	trisilver arsenite
AL36	arsenic compounds
29	**organophosphorus compounds**
115-86-6	triphenyl phosphate
1330-78-5	tritolyl phosphate
78-40-0	phosphoric acid, triethyl ester
26444-49-5	diphenyl tolyl phosphate
115-96-8	tris(2-chloroethyl)phosphate
126-73-8	tributyl phosphate
78-30-8	tris(o-cresyl) phosphate
512-56-1	trimethylphosphate

SubstanceGroup No./CAS No. etc	Substance Name
545-55-1	tri(aziridin-1-yl)phosphine oxide
126-72-7	tris(2,3-dibromopropan-1-yl) phosphate
13674-87-8	2-propanol, 1,3-dichloro-, phosphate (3:1)
25155-23-1	tris(dimethylphenyl) phosphate
38051-10-4	phosphoric acid, 2,2-bis(chloromethyl)-1,3-propanediyl tetrakis(2-chloroethyl)
13674-84-5	2-propanol, 1-chloro-, phosphate (3:1)
66108-37-0	2,2-bis(bromomethyl)-3-chloropropyl bis[2-chloro-1-(chloromethyl)ethyl] phosphate
68937-41-7	Phenol, isopropylated, phosphate (3:1)
1241-94-7	2-ethylhexan-1-yl diphenyl phosphate
57583-54-7	tetraphenyl m-phenylene bis(phosphate)
125997-21-9	phosphoric trichloride, polymer with 1,3-benzenediol, phenyl ester
139189-30-3	phosphoric acid, 1,3-phenylene tetrakis(2,6-dimethylphenyl) ester
5945-33-5	bisphenol A bis(diphenyl phosphate)
181028-79-5	reaction products of phosphoric trichloride, bisphenol A and phenol
184530-92-5	poly[oxy[(2-chloro-1-methylethoxy)phosphinylidene]oxy-1,2-ethandiyloxy-1,2-ethandiyl], alpha-(2-chloro-1-methylethyl)-OMEGA-[[bis(2-chloro-1-methylethoxy)phosphinyl]oxy]
AL39	organic phosphorus compounds
30	**polyvinyl chloride**
9002-86-2 25037-47-2 26793-37-3	polymer of chloroethene (polyvinyl chloride) syndiotactic polymer of chloroethene isotactic polymer of chloroethene
AL41	Other polyvinyl chlorides
AL41	PVC copolymers
31	**phthalic esters**
117-81-7	bis(2-ethylhexan-1-yl) phthalate (DEHP)
84-74-2	dibutan-1-yl phthalate
85-68-7	benzyl butan-1-yl phthalate
28553-12-0	diisononyl phthalate (DINP)
68515-48-0	di(C8-10-branched,C9-rich alkyl) phthalate
26761-40-0	1,2-Benzenedicarboxylic acid diisodecyl ester (DIDP)
68515-49-1	di(C9-11-branched,C10-rich alkyl) phthalate
117-84-0	bis(n-octyl) phthalate (DNOP)
84-69-5	diisobutyl phthalate (DIBP)
117-82-8	bis(2-methoxyethyl) phthalate
84-66-2	diethyl phthalate
84-61-7	dicyclohexan-1-yl phthalate
131-16-8	dipropan-1-yl phthalate
84-75-3	dihexan-1-yl phthalate
131-11-3	dimethylphthalate
3648-21-3	diheptylphthalate
605-50-5	diisopentyl phthalate
68515-42-4	di(C7-11-branched and linear alkyl) phthalate
3648-20-2	diundecan-1-yl phthalate
71888-89-6	1,2-benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich
68515-44-6	di(branched and linear heptyl) phthalate
68515-45-7	di(branched and linear nonyl) phthalate
111381-89-6	alkyl(C7) alkyl(C9) phthalate
111381-90-9	alkyl(C7) alkyl(C11) phthalate
111381-91-0	alkyl(C9) alkyl(C11) phthalate
776297-69-9	isopentyl pentyl phthalate
131-18-0	dipentan-1-yl phthalate (DPP)

SubstanceGroup No./CAS No. etc	Substance Name
68515-50-4	di(branched and linear hexyl) phthalate
68515-51-5	bis[alkyl(C=6-10)] phthalate
68648-93-1	mixture of bis[alkyl(C=6,8,10)] phthalate
AL43	phthalic esters
32	**perfluorooctane sulfonate and its related substances**
AL46	PFOS related substances
1763-23-1	perfluoro(octane-1-sulfonic acid)
45298-90-6	perfluoroctane sulfonate anion
307-35-7	perfluoro-1-octanesulfonyl fluoride
306975-62-2	polymer of 1,1-dichloroethene, dodecan-1-yl methacrylate and 2-[N-methylperfluoroalkane(C4-8)sulfonamido]ethyl acrylate
2991-51-7	potassium (N-ethylperfluorooctane-1-sulfonamido)acetate
2795-39-3	potassium perfluorooctane-1-sulfonate
29081-56-9	ammonium perfluorooctane-1-sulfonate
29457-72-5	lithium perfluorooctane-1-sulfonate
56773-42-3	tetraethylammonium perfluorooctane-1-sulfonate
355-46-4	perfluorohexane-1-sulphonic acid
68259-08-5	ammonium perfluorohexane-1-sulphonate
3871-99-6	perfluorohexanesulfonic acid potassium salt
33	**polycyclic aromatic hydrocarbons and its mixtures**
90640-80-5	anthracene oil
91995-17-4	anthracene oil, anthracene paste, distillation lights
91995-15-2	anthracene oil, anthracene paste, anthracene fraction
90640-82-7	anthracene oil, anthracene-low
90640-81-6	anthracene oil, anthracene paste
208-96-8	acenaphthylene
83-32-9	acenaphthene
86-73-7	9H-fluorene
85-01-8	phenanthrene
206-44-0	fluoranthene
129-00-0	pyrene
203-12-3	benzo[ghi]fluoranthene
27208-37-3	cyclopenta[cd]pyrene
198-55-0	perylene
193-39-5	indeno[1,2,3-cd]pyrene
191-24-2	benzo[g,h,i]perylene
191-26-4	dibenzo[def,mno]chrysene
191-07-1	coronene
91-20-3	naphthalene
74336-60-0	1-[(5,7-dichloro-1,9-dihydro-2-methyl-9-oxopyrazolo[5,1-b]quinazolin-3-yl)azo]anthraquinone
AL49	polycyclic aromatic hydrocarbons (PAH; PCAH) in polymers, selected
50-32-8	benzo[a]pyrene
192-97-2	benzo[e]pyrene
120-12-7	anthracene
56-55-3	benzo[a]anthracene
1718-53-2	benzo[a]anthracene
218-01-9	chrysene
1719-03-5	chrysene
205-82-3	benz(j)fluoranthene
207-08-9	benzo[k]fluoranthene
53-70-3	dibenz[a,h]anthracene
205-99-2	benzo(e)acephenanthrylene
56-49-5	3-methyl-1,2-dihydrocyclopenta[ij]tetraphene
57-97-6	7,12-dimethyltetraphene

SubstanceGroup No./CAS No. etc	Substance Name
189-55-9	benzo(r,s,t)pentaphene
189-64-0	dibenzo[b,def]chrysene
191-30-0	dibenzo[def,p]chrysene
192-65-4	naphtho[1,2,3,4-def]chrysene
194-59-2	7H-dibenzo[c,g]carbazole
224-42-0	dibenz[a,j]acridine
226-36-8	dibenz[a,h]acridine
3697-24-3	5-methylchrysene
5385-75-1	dibenzo[a,e]fluoranthene
5522-43-0	1-nitropyrene
AL49	Other polycyclic aromatic hydrocarbons and its mixtures
34	**mineral fibres (natural or synthetic) except continuous filament fibres**
AL57	aluminiosilicate, refractory ceramic fibres
AL58	zirconia aluminosilicate, refractory ceramic fiber
142844-00-6	refractory ceramic fibers
329211-92-9	calcium-magnesium-zirconium-silicate mixture
675106-31-7	aluminium chloride, basic reaction products with silica
35	**biocidal coatings / biocidal additives**
73790-28-0	1H-imidazole, 1-[2-(2,4-dichlorophenyl)-2-(2-propen-1-yloxy)ethyl]-
25254-50-6	1,1',1''-(1,3,5-Triazinane-1,3,5-triyl)tri(propan-2-ol)
2634-33-5	1,2-benzisothiazol-3(2H)-one
140-95-4	urea, 1,3-bis(hydroxymethyl)-
70862-65-6	1,3-didecyl-2-methyl-1H-imidazolium chloride
78491-02-8	1-[1,3-bis(hydroxymethyl)-2,5-dioxoimidazolidin-4-yl]-1,3-bis(hydroxymethyl)urea
4719-04-4	1,3,5-triazine-1,3,5(2H,4H,6H)-triethanol
10222-01-2	2,2-dibromo-2-cyanoacetamide
2527-58-4	2,2'-dithiobis[N-methylbenzamide]
1777-82-8	2,4-dichlorobenzyl alcohol
2491-38-5	2-bromo-1-(4-hydroxyphenyl)ethan-1-one
35691-65-7	2-bromo-2-(bromomethyl)pentanedinitrile
79-07-2	2-chloroacetamide
2682-20-4	3(2H)-Isothiazolone, 2-methyl-
4299-07-4	2-butyl-1,2-benzothiazol-3(2H)-one
122-99-6	ethyleneglycolmonophenyl ether
90-43-7	biphenyl-2-ol
55965-84-9	mixture of 2-methyl-1,2-thiazol-3(2H)-one and 5-chloro-2-methyl-1,2-thiazol-3(2H)-one
55406-53-6	3-iodo-2-propynyl butylcarbamate
64359-81-5	4,5-dichloro-2-octyl-2H-isothiazol-3-one
1192-52-5	4,5-dichloro-3H-1,2-dithiol-3-one
3380-30-1	5-Chloro-2-(4-chlorophenoxy)phenol
26172-55-4	2H-isothiozol-3-one, 5-chloro-2-methyl-
67375-30-8	alpha-cypermethrin
20859-73-8	aluminium phosphide
130328-18-6	aluminium sodium silicate-silver complex; Silver zeolite
130328-19-7	aluminium sodium silicate-silver copper complex; Silver Copper Zeolite
139734-65-9	amines, n-C10-16-alkyltrimethylenedi-, reaction products with chloroacetic acid
12124-97-9	ammonium bromide
8001-54-5	alkyl-benzyl-dimethylammonium chloride (synonym: Benzalkonium chloride) (alkyl C=12,14,16)
139-07-1	benzenemethanaminium, N-dodecyl-N,N-dimethyl-, chloride
149-30-4	1,3-benzothiazole-2(3H)-thione
19379-90-9	N-benzyl-N,N-bis(2-hydroxyethyl)-1-dodecanaminium chloride

SubstanceGroup No./CAS No. etc	Substance Name
122-19-0	benzyldimethyl(octadecyl)ammonium chloride
37139-99-4	benzyldimethyloleylammonium chloride
7281-04-1	benzyldodecyldimethylammonium bromide
14548-60-8	(benzyloxy)methanol
1314-13-2	zinc oxide
1314-98-3	zinc sulfide
137-30-4	bis(dimethyldithiocarbamato-kappa(2)S,S')zinc
52315-07-8	cypermethrin
82657-04-3	bifenthrin
14915-37-8	bis(1-hydroxy-1H-pyridine-2-thionato-O,S)copper
3064-70-8	bis(trichloromethyl) sulphone
32718-18-6	bromochloro-5,5-dimethylimidazolidine-2,4-dione
52-51-7	2-bromo-2-nitropropane-1,3-diol
68132-19-4	polyphosphoric acids, compds. with ethoxylated coco alkylamines
7492-55-9	calcium di[(2E,4E)-hexa-2,4-dienoate]
133-06-2	1,2,3,6-tetrahydro-N-(trichloromethylthio)phthalimide
10605-21-7	methyl 1H-benzoimidazol-2-ylcarbamate
122-18-9	N-benzyl-N,N-dimethylhexadecan-1-aminium,chloride(1:1)
123-03-5	cetylpyridinium chloride
122453-73-0	4-bromo-2-(4-chlorophenyl)-1-ethoxymethyl-5-(trifluoromethyl)pyrrole-3-carbonitrile
59-50-7	4-chloro-3-methylphenol
1897-45-6	2,4,5,6-tetrachloroisophthalonitrile
15545-48-9	chlorotoluron
67564-91-4	cis-4-[3-(p-tert-butylphenyl)-2-methylpropyl]-2,6-dimethylmorpholine
210880-92-5	(E)-1-(2-chloro-1,3-thiazol-5-ylmethyl)-3-methyl-2-nitroguanidine
191546-07-3	copolymer of 2-propenal and propane-1,2-diol
12069-69-1	copper, [carbonato(2-)]dihydroxydi-
20427-59-2	copper dihydroxide
1317-38-0	copper (II) oxide (CuO)
7758-98-7	copper (II) sulfate
7758-99-8	copper(II) sulfate pentahydrate
8001-58-9	coal tar creosote
312600-89-8	Cu-HDO; bis(N-cyclohexyl- diazenium-dioxy)-copper); bis[1-cyclohexyl-1,2-di(hydroxy-.kappa.O)diazeniumato(2-)]-copper
28159-98-0	N'-tert-butyl-N-cyclopropyl-6-(methylthio)-1,3,5-triazine-2,4-diamine
66603-10-9	cyclohexylhydroxydiazene 1-oxide, potassium salt
68359-37-5	cyano(4-fluoro-3-phenoxyphenyl)methyl 3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropane-1-carboxylate
94361-06-5	2-(4-chlorophenyl)-3-cyclopropan-1-yl-1-(1H-1,2,4-triazole-1-yl)-lbutan-2-ol
533-74-4	3,5-dimethyl-1,3,5-thiadiazinane-2-thione
894406-76-9	DDACarbonate; LZ 34000; reaction mass of N,N-didecyl-N,N-dimethyl-ammonium carbonate and N,N-didecyl-N,N-dimethyl-ammonium bicarbonate
32426-11-2	decyldimethyloctylammonium chloride
52918-63-5	(S)-cyano(3-phenoxyphenyl)methyl (1R,3R)-3-(2,2-dibromoethenyl)-2,2-dimethylcyclopropane-1-carboxylate
1085-98-9	dichlofluanid
97-23-4	2,2'-methylene-bis(4-chlorophenol)
1317-39-1	copper (I) oxide (Cu2O)
2390-68-3	didecyldimethylammonium bromide
7173-51-5	didecyldimethylammonium chloride
94667-33-1	didecylmethylpoly(oxyethyl)ammonium propionate; Poly(oxy-1,2-ethanediyl), .alpha.-[2-(didecylmethylammonio)ethyl]- .omega.-hydroxy-, propanoate (salt)

SubstanceGroup No./CAS No. etc	Substance Name
5538-94-3	N,N-dimethyl-N-octyl-1-octanaminium chloride
624-49-7	dimethylfumarate
27668-52-6	N,N-dimethyl-N-[3-(trimethoxysilyl)propyl]-1-octadecanaminium chloride
41591-87-1	dimethyltetradecyl[3-(trimethoxysilyl)-propyl]ammonium chloride
16731-55-8	disulfurous acid, dipotassium salt
3696-28-4	dipyrithione
138-93-2	disodium cyanodithiocarbamate
7681-57-4	disodium disulphite
12280-03-4	boron sodium oxide (B8Na2O13), tetrahydrate
330-54-1	3-(3,4-dichlorophenyl)-1,1-dimethylurea
13590-97-1	dodecylguanidine monohydrochloride
51229-78-8	adamantane, cis-1-(3-chloroallyl)-3,5,7-traiaza-1- azonia, chloride
66230-04-4	(S)-cyano(3-phenoxyphenyl)methyl (S)-2-(4-chlorophenyl)-3-methylbutanoate
3586-55-8	(ethylenedioxy)dimethanol
80844-07-1	4-(4-ethoxyphenyl)-4-methyl-1-(3-phenoxyphenyl)-2-oxapentane
122-14-5	O,O-dimethyl O-(3-methyl-4-nitrophenyl) phosphorothioate
72490-01-8	ethyl [2-(4-phenoxyphenoxy)ethyl]carbamate
120068-37-3	fipronil
131341-86-1	4-(2,2-Difluoro-1,3-benzodioxol-4-yl)-1H-pyrrole-3-carbonitrile
101463-69-8	benzamide, N-[[[4-[2-chloro-4-(trifluoromethyl)phenoxy]-2-fluorophenyl]amino]carbonyl]-2,6-difluoro-
2164-17-2	fluometuron
133-07-3	N-(trichloromethylthio)phthalimide
111-30-8	glutaraldehyde
115044-19-4	guazatine triacetate
110-44-1	sorbic acid
12767-90-7	hexaboron dizinc undecaoxide
16961-83-4	hexafluorosilicic acid
26716-20-1	2-propenoic acid, 2-methyl-, 2-[(1,1-dimethylethyl)amino]ethyl ester, homopolymer
822-89-9	hydroxyl-2-pyridone
35554-44-0	imazalil
7553-56-2	diiodine
34123-59-6	N,N-dimethyl-N'-(4-isopropylphenyl)urea
79-33-4	(S)-2-hydroxypropanoic acid
9005-53-2	lignin
12057-74-8	trimagnesium diphosphide
84696-25-3	margosa ext.
137-41-7	potassium methyldithiocarbamate
137-42-8	metham sodium
4080-31-3	methenamine 3-chloroallylochloride
139-08-2	benzenemethanaminium, N,N-dimethyl-N-tetradecyl-, chloride
2372-82-9	N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine
31075-24-8	1,2-ethanediamine, N1,N1,N2,N2-tetramethyl-, polymer with 1,1'-oxybis[2-chloroethane]
5625-90-1	N,N'-methylenebismorpholine (MBM)
142-59-6	disodium ethane-1,2-diyldicarbamodithioate
1338-02-9	copper salt of naphthenic acids
214710-34-6	N-didecyl-N-dipolyethoxyammonium borate; didecylpolyoxethylammonium borate
26530-20-1	2-octyl-2H-isothiazol-3-one
374572-91-5	2,2'-[1,2-ethanediylbis(oxy)]bisethanamine polymer with guanidine monohydrochloride
10380-28-6	bis(quinolin-8-olato-kappaN,kappaO)copper(II)

SubstanceGroup No./CAS No. etc	Substance Name
20018-09-1	P-[(diiodomethyl)sulphonyl]toluene
52645-53-1	3-phenoxybenzyl 3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate
57028-96-3	poly(hexamethylendiamine guanidinium chloride)
27083-27-8	guanidine, N,N'''-1,6-hexanediylbis[N'-cyano-, polymer with 1,6-hexanediamine, hydrochloride
91403-50-8	poly(hexamethylenebiguanide)
32289-58-0	polyhexamethylene; biguanide hydrochloride
1802181-67-4	poly[iminocarbonimidoyliminocarbonimidoylimino-1,6-hexanediyl], hydrochloride
25655-41-8	compound of (polymer of 1-vinyl-2-pyrrolidone) and diiodine
24634-61-5	potassium (E,E)-hexa-2,4-dienoate
13707-65-8	potassium 2-biphenylate
128-03-0	potassium dimethyldithiocarbamate
10117-38-1	dipotassium sulfite
7287-19-6	prometryn
60207-90-1	1-{[2-(2,4-dichlorophenyl)-4-propan-1-yl-1,3-dioxolan-2-yl]methyl}-1H-1,2,4-triazole
3811-73-2	2-pyridinethiol, 1-oxide, sodium salt
13463-41-7	pyrithione zinc
100085-64-1	quaternary ammonium compounds, [2-[[2-[(2-carboxyethyl)(2-hydroxyethyl)amino]ethyl]amino]-2-oxoethyl]coco alkyldimethyl, hydroxides, inner salts
68989-00-4	quaternary ammonium compounds, benzyl-C10-16-alkyldimethyl, chlorides
85409-22-9	quaternary ammonium compounds, benzyl-C12-14-alkyldimethyl, chlorides
68424-85-1	benzyl[alkyl(C12-16)]dimethylammonium chloride
68391-01-5	alkyl(C12-18)(benzyl)(dimethyl)ammonium chloride
68424-84-0	quaternary ammonium compounds, benzyl-C8-16-alkyldimethyl, chlorides
91080-29-4	quaternary ammonium compounds, benzyl-C8-18-alkyldimethyl, bromides
63449-41-2	quaternary ammonium compounds, benzyl-C8-18-alkyldimethyl, chlorides
61789-71-7	quaternary ammonium compounds, benzylcoco alkyldimethyl, chlorides
61789-80-8	quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, chlorides
85409-23-0	quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides
61789-18-2	quaternary ammonium compounds, coco alkyltrimethyl, chlorides
68391-06-0	quaternary ammonium compounds, di-C6-12-alkyldimethyl, chlorides
68424-95-3	quaternary ammonium compounds, di-C8-10-alkyldimethyl, chlorides
73398-64-8	quaternary ammonium compounds, di-C8-18-alkyldimethyl, chlorides
61789-77-3	quaternary ammonium compounds, dicoco alkyldimethyl, chlorides
308074-50-2	quaternary ammonium iodides
163269-30-5	3-(1-benzothiophen-2-yl)-4-oxo-5,6-dihydro-4H-1,4lambda(4),2-oxathiazine
7440-22-4	silver (Ag)
13463-67-7	titanium dioxide
1167997-68-3	silver adsorbed on silicon dioxide (as a nanomaterial in the form of a stable aggregate with primary particles in the nanoscale)
7783-90-6	silver chloride
7761-88-8	nitric acid silver(1+) salt
308069-39-8	silver phosphate glass
155925-27-2	silver sodium zirconium hydrogenphosphate
130328-20-0	silver zinc zeolite; Aluminium sodium silicate-silver zinc complex
398477-47-9	silver-zinc-aluminium-boronphosphate glass; Glass oxide, silver- and zinc-containing
3784-03-0	sodium 2,4,6-trichlorophenolate
132-27-4	sodium 2-biphenylate

SubstanceGroup No./CAS No. etc	Substance Name
7647-15-6	sodium bromide
128-04-1	sodium dimethyldithiocarbamate
10187-52-7	sodium 4-chloro-2-(5-chloro-2-hydroxybenzyl)phenolate
7631-90-5	monosodium sulfite
70161-44-3	sodium N-(hydroxymethyl)glycinate
15733-22-9	sodium p-chloro-m-cresolate
7757-83-7	sodium sulphite
87-90-1	1,3,5-trichloroisocyanuric acid
21564-17-0	2-[(thiocyanatomethyl)sulfanyl]-1,3-benzothiazole
107534-96-3	1-(4-chlorophenyl)-4,4-dimethyl-3-(1H-1,2,4-triazol-1-ylmethyl)pentan-3-ol
886-50-0	terbutryn
5395-50-6	tetrahydro-1,3,4,6-tetrakis(hydroxymethyl)imidazo[4,5-d]imidazole-2,5(1H,3H)-dione
55566-30-8	bis[tetrakis(hydroxymethyl)phosphonium] sulfate
148-79-8	2-(1,3-thiazol-4-yl)-1H-benzoimidazole
111988-49-9	N-{3-[(6-chloro-3-pyridyl)methyl]-1,3-thiazolidin-2-ylidene}carbamonitrile
153719-23-4	3-[(2-chloro-1,3-thiazol-5-yl)methyl]-5-methyl-N-nitro-1,3,5-oxadiazinan-4-imine
137-26-8	N,N,N',N'-tetramethyl-2,3-dithiadithiosuccinamide
2398-96-1	tolnaftate
731-27-1	N-{[dichloro(fluoro)methyl]sulfanyl}-N',N'-dimethyl-N-p-tolylsulfamide
127-65-1	benzenesulfonamide, N-chloro-4-methyl-, sodium salt
43121-43-3	1-(4-chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)butan-2-one
81741-28-8	tributyltetradecylphosphonium chloride
AL60	biocidal coatings / biocidal additives
36	**volatile organic compounds**
67-63-0	propan-2-ol
108-88-3	toluene
67-64-1	acetone
123-86-4	butyl acetate
67-56-1	methanol
1330-20-7	xylene
78-93-3	ethyl methyl ketone
75-09-2	dichloromethane
100-42-5	styrene
64-17-5	ethanol
100-41-4	ethylbenzene
109-99-9	tetrahydrofuran
107-98-2	2-propanol, 1-methoxy-
71-36-3	1-butanol
67-66-3	chloroform
108-10-1	methyl isobutyl ketone
142-82-5	heptane
141-78-6	ethyl acetate
79-01-6	1,1,2-trichloroethene
108-94-1	cyclohexanone
37	**perchlorobenzene**
118-74-1	perchlorobenzene
38	**chlorinated or brominated dibenzo-p-dioxins or dibenzofurans**
67562-39-4	dibenzofuran, 1,2,3,4,6,7,8-heptachloro-
35822-46-9	chlorinated dibenzo-p-dioxins (CDDs) (1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin)
55673-89-7	dibenzofuran, 1,2,3,4,7,8,9-heptachloro-
70648-26-9	chlorodibenzofurans (CDFs) (1,2,3,4,7,8-HexaCDF)

SubstanceGroup No./CAS No. etc	Substance Name
39227-28-6	1,2,3,4,7,8-hexachlorooxanthrene
57117-44-9	chlorodibenzofurans (CDFs) (1,2,3,6,7,8-HexaCDF)
57653-85-7	chlorinated dibenzo-p-dioxins (CDDs) (1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin)
72918-21-9	dibenzofuran, 1,2,3,7,8,9-hexachloro-
19408-74-3	chlorinated dibenzo-p-dioxins (CDDs) (1,2,3,7,8,9-hexachlorodibenzo-p-dioxin)
57117-41-6	chlorodibenzofurans (CDFs) (1,2,3,7,8-PentaCDF)
40321-76-4	chlorinated dibenzo-p-dioxins (CDDs) (1,2,3,7,8-Pentachlorodibenzo-p-dioxin)
60851-34-5	chlorodibenzofurans (CDFs) (2,3,4,6,7,8-HexaCDF)
57117-31-4	chlorodibenzofurans (CDFs) (2,3,4,7,8-PentaCDF)
51207-31-9	chlorodibenzofurans (CDFs) (2,3,7,8-TetraCDF)
1746-01-6	2,3,7,8-tetrachlorodibenzo[b,e][1,4]dioxin
33857-26-0	dibenzo[b,e][1,4]dioxin, 2,7-dichloro-
34465-46-8	chlorinated dibenzo-p-dioxins (CDDs) (Hexachlorodibenzo-p-dioxin)
39001-02-0	dibenzofuran, octachloro-
3268-87-9	chlorinated dibenzo-p-dioxins (CDDs) (Octachlorodibenzo-p-dioxin)
39	**perchloropentacyclo[5.3.0.0(2,6).0(3,9).0(4,8)]decane mirex**
2385-85-5	perchloropentacyclo[5.3.0.0(2,6).0(3,9).0(4,8)]decane
40	**4-nitrobiphenyl and its salts**
92-93-3	4-nitrobiphenyl
41	**N-nitrosamines**
1116-54-7	2,2'-(nitrosoimino)bisethanol
55-18-5	diethylnitrosoamine
62-75-9	dimethylnitrosoamine
612-64-6	N-nitroso ethyl phenyl amine
10595-95-6	N-nitroso-N-methylethylamine
614-00-6	N-methyl-N-nitrosoaniline
59-89-2	N-nitrosomorpholine
930-55-2	1-nitrosopyrrolidine
601-77-4	N-nitrosodi-i-propyl amine
924-16-3	N-nitrosodibutylamine
621-64-7	nitrosodipropylamine
100-75-4	1-nitrosopiperidine
42	**specified organic pigment**
6041-94-7	4-[(2,5-dichlorophenyl)azo]-3-hydroxy-N-phenylnaphthalene-2-carboxamide (pigment red 2)
980-26-7	quino[2,3-b]acridine-7,14-dione, 5,12-dihydro-2,9-dimethyl- (pigment red 122)
38489-25-7	2-[(2,5-Dichlorophenyl)diazenyl]-N-(6-ethoxy-1,3-benzothiazol-2-yl)-3-oxobutanamide
5102-83-0	N,N'-bis(2,4-dimethylphenyl)-3,3'-dioxo-2,2'-[(3,3'-dichlorobiphenyl-4,4'-diyl)bis(diazenediyl)]dibutanamide
5567-15-7	butanamide, 2,2'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[N-(4-chloro-2,5-dimethoxyphenyl)-3-oxo-
3520-72-7	4,4'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-one]
6358-37-8	2,2'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[N-(4-methylphenyl)-3-oxobutyramide]
5468-75-7	butanamide, 2,2'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[N-(2-methylphenyl)-3-oxo-
4531-49-1	2,2'-[(3'-dichloro[1,1-biphenyl]-4,4'-diyl)bis(2,1-diazenediyl)]-N,N'-bis(2-methoxyphenyl)-3,3'-dioxodibutanamide

SubstanceGroup No./CAS No. etc	Substance Name
15793-73-4	4,4'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[2,4-dihydro-5-methyl-2-(p-tolyl)-3H-pyrazol-3-one]
22094-93-5	2,2'-[(2,2',5,5'-tetrachloro[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[N-(2,4-dimethylphenyl)-3-oxobutyramide]
6358-85-6	C.I. Pigment Yellow 12
43	**PFOA and its salts, perfluorooctanoic acids C8F15O2X (X = H, NH4, and metal salts)**
335-67-1	2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-Pentadecafluorooctanoic acid
3825-26-1	ammonium 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctanoate
335-95-5	sodium pentadecafluorooctanoate
2395-00-8	potassium perfluorooctanoate
335-93-3	silver(1+) perfluorooctanoate
335-66-0	2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctanoyl fluoride
376-27-2	methyl perfluorooctanoate
3108-24-5	ethyl perfluorooctanoate
AL48	PFOA related substances
44	**nonylphenol, ethoxylates**
26264-02-8	14-(nonan-1-ylphenoxy)-3,6,9,12-tetraoxatetradecan-1-ol
27177-08-8	29-(nonan-1-ylphenoxy)-3,6,9,12,15,18,21,24,27-nonaoxanonacosan-1-ol
26571-11-9	26-(nonylphenoxy)-3,6,9,12,15,18,21,24-octaoxahexacosan-1-ol
27177-05-5	23-(nonan-1-ylphenoxy)-3,6,9,12,15,18,21-heptaoxatricosan-1-ol
65455-72-3	Decaethylene glycol, isononylphenyl ether
27176-93-8	2-[2-(nonan-1-ylphenoxy)ethoxy]ethanol
7311-27-5	11-(4-nonylphenoxy)-3,6,9-trioxaundecan-1-ol
9016-45-9	poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydroxy-
20636-48-0	nonylphenol, polyethylene glycol ether
27177-01-1	nonylphenol, polyethylene glycol ether
27942-26-3	poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy
50974-47-5	poly(oxy-1,2-ethanediyl), .alpha.-(1-oxo-2-propenyl)-.omega.-(nonylphenoxy)-
51811-79-1	poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, phosphate
54612-36-1	nonylphenylpolyoxyethylene sulfosuccinate
68412-53-3	poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, branched, phosphates
68649-55-8	poly(oxy-1,2-ethanediyl), alpha-sulfo-omega-(nonylphenoxy)-, branched, ammonium salt
9014-90-8	poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-(nonylphenoxy)-, sodium salt (1:1)
9051-57-4	poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-(nonylphenoxy)-, ammonium salt (1:1)
26027-38-3	alpha-(4-nonylphenyl)-omega-hydroxypoly(oxyethylene)
68412-54-4	poly (oxy-1,2-ethanediyl), alpha –(nonylphenyl)-omega-hydroxy-, branched
127087-87-0	poly (oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched
51938-25-1	poly(oxy-1,2-ethanediyl), .alpha.-(2-nonylphenyl)-.omega.-hydroxy-
37205-87-1	poly(oxy-1,2-ethanediyl), .alpha.-(isononylphenyl)-.omega.-hydroxy-
104-35-8	ethanol, 2-(4-nonylphenoxy)-
20427-84-3	2-[2-(4-nonylphenoxy)ethoxy]ethanol
34166-38-6	17-(4-nonylphenoxy)-3,6,9,12,15-pentaoxaheptadecan-1-ol
27942-27-4	20-(4-nonylphenoxy)-3,6,9,12,15,18-hexaoxaicosan-1-ol
156609-10-8	ethanol, 2-[2-(4-tert-nonylphenoxy)ethoxy]-
14409-72-4	26-(4-nonylphenoxy)-3,6,9,12,15,18,21,24-octaoxahexacosan-1-ol
45	**perchlorates**
7790-98-9	ammonium perchlorate
13465-95-7	barium perchlorate

SubstanceGroup No./CAS No. etc	Substance Name
13637-76-8	lead diperchlorate
7791-03-9	lithium perchlorate
10034-81-8	magnesium perchlorate
99749-31-2	perchloric acid, reaction products with lead oxide (PbO) and triethanolamine
13455-31-7	cobalt diperchlorate
7616-83-3	mercury diperchlorate
13520-61-1	nickel diperchlorate hexahydrate
13637-71-3	nickel diperchlorate
7778-74-7	potassium perchlorate
7601-89-0	sodium perchlorate
15596-83-5	thallium(3+) perchlorate
46	**benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene(BNST)**
68921-45-9	benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene(BNST)
47	**halogen contain substances for plastic additives**
38489-25-7	2-[(2,5-Dichlorophenyl)diazenyl]-N-(6-ethoxy-1,3-benzothiazol-2-yl)-3-oxobutanamide
6358-30-1	8,18-dichloro-5,15-diethyl-5,15-dihydrodiindolo[3,2-b:3',2'-m]triphenodioxazine (C. I. pigment violet 23)
14302-13-7	C.I. Pigment Green 36
7023-61-2	2-Naphthalenecarboxylic acid, 4-[(5-chloro-4-methyl-2-sulfophenyl)azo]-3-hydroxy-, calcium salt (1:1) (C. I. pigment red 48-2)
48	**dinitrogen oxide**
10024-97-2	dinitrogen oxide
49	**Substances of very high concern of the REACH regulation**
120-12-7	anthracene
101-77-9	4,4'-methylenedianiline
84-74-2	dibutan-1-yl phthalate
7646-79-9	cobalt(II) dichloride
1303-28-2	diarsenic pentaoxide
1327-53-3	diarsenic trioxide
7789-12-0	disodium heptaoxidodichromate dihydrate
10588-01-9	disodium heptaoxidodichromate
81-15-2	1-tert-Butyl-3,5-dimethyl-2,4,6-trinitrobenzene (musk xylene)
117-81-7	bis(2-ethylhexan-1-yl) phthalate (DEHP)
25637-99-4	hexabromocyclododecane(HBCDD)
3194-55-6	1,2,5,6,9,10-hexabromocyclododecane
134237-51-7	rel-(1R,2S,5R,6R,9R,10S)-1,2,5,6,9,10-hexabromocyclododecane
134237-50-6	rel-(1R,2R,5S,6R,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane
134237-52-8	rel-(1R,2R,5R,6S,9S,10R)-1,2,5,6,9,10-hexabromocyclododecane
85535-84-8	chloroalkane(C10-13)
56-35-9	1,1,1,3,3,3-hexabutyldistannoxane
7784-40-9	lead(II) hydrogenarsenate
85-68-7	benzyl butan-1-yl phthalate
15606-95-8	triethyl arsenate
90640-80-5	anthracene oil
91995-17-4	anthracene oil, anthracene paste, distillation lights
91995-15-2	anthracene oil, anthracene paste, anthracene fraction
90640-82-7	anthracene oil, anthracene-low
90640-81-6	anthracene oil, anthracene paste
65996-93-2	pitch, coal tar, high-temperature
AL57	aluminosilicate refractory ceramic fibres

SubstanceGroup No./CAS No. etc	Substance Name
AL58	zirconia aluminosilicate, refractory ceramic fibres
121-14-2	2,4-dinitrotoluene
84-69-5	diisobutyl phthalate (DIBP)
7758-97-6	lead(II) tetraoxidochromate
12656-85-8	C.I. pigment red 104
1344-37-2	C.I. pigment yellow 34
115-96-8	tris(2-chloroethyl)phosphate
79-06-1	acrylamide
79-01-6	1,1,2-trichloroethene
10043-35-3	boric acid
11113-50-1	boric acid
1303-96-4	borax
1330-43-4	tetraboron disodium heptaoxide
12179-04-3	tetraboron disodium heptaoxide pentahydrate
12267-73-1	tetraboron disodium heptaoxide, hydrate
7775-11-3	disodium tetraoxidochromate
7789-00-6	dipotassium tetraoxidochromate
7789-09-5	diammonium heptaoxidodichromate
7778-50-9	dipotassium heptaoxidodichromate
10124-43-3	cobalt(II) sulphate
10141-05-6	cobalt(II) bis(nitrate)
513-79-1	cobalt(II) carbonate
71-48-7	cobalt(II) diacetate
109-86-4	2-methoxyethanol
110-80-5	2-ethoxyethanol
1333-82-0	chromium trioxide
AL13	acids generated from chromium trioxide and their oligomers:
7738-94-5	dihydrogen(tetraoxidochromate)
13530-68-2	dihydrogen(heptaoxidodichromate)
AL13	oligomers of chromic acid and dichromic acid
111-15-9	2-ethoxyethyl acetate
7789-06-2	strontium tetraoxidochromate
68515-42-4	di(C7-11-branched and linear alkyl) phthalate
7803-57-8	hydrazine monohydrate
302-01-2	hydrazine
872-50-4	1-methyl-2-pyrrolidone
96-18-4	1,2,3-trichloropropane
71888-89-6	1,2-benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich
24613-89-6	dichromium(III) tris(chromate)
11103-86-9	potassium dizinc(II) bis(chromate) hydroxide
49663-84-5	pentazinc(II) chromate octahydroxide
AL57	aluminosilicate Refractory Ceramic Fibres (RCF)
AL58	zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF)
25214-70-4	formaldehyde, polymer with benzenamine
117-82-8	bis(2-methoxyethyl) phthalate
90-04-0	2-methoxyaniline
140-66-9	4-(2,4,4-trimethylpentan-2-yl)phenol
107-06-2	1,2-dichloroethane
111-96-6	1-methoxy-2-(2-methoxyethoxy)ethane
7778-39-4	arsenic acid
7778-44-1	calcium bis(arsenate)
3687-31-8	trilead(II) bis(arsenate)
127-19-5	N,N-dimethylacetamide
101-14-4	2,2'-dichloro-4,4'-methylenedianiline
77-09-8	3,3-bis(4-hydroxyphenyl)isobenzofuran-1(3H)-one (phenolphthalein)

SubstanceGroup No./CAS No. etc	Substance Name
13424-46-9	lead(II) diazide
15245-44-0	lead(II) 2,4,6-trinitrobenzene-1,3-diolate
6477-64-1	lead(II) dipicrate
112-49-2	2,5,8,11-tetraoxadodecane
110-71-4	1,2-dimethoxyethane
1303-86-2	diboron trioxide
75-12-7	formamide
17570-76-2	lead(II) dimethanesulfonate
2451-62-9	1,3,5-tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione
59653-74-6	rel-1,3,5-tris[(R)-oxiran-2-ylmethyl]-1,3,5-triazinane-2,4,6-trione
90-94-8	bis[4-(dimethylamino)phenyl]methanone (michler's ketone)
101-61-1	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (michler's base)
548-62-9	dimethyl(4-{bis[4-(dimethylamino)phenyl]methylidene}cyclohexa-2,5-dien-1-ylidene)ammonium chloride (C.I. basic violet 3)
2580-56-5	dimethyl(4-{(4-anilino-1-naphthyl)[4-(dimethylamino)phenyl]methylidene}cyclohexa-2,5-dien-1-ylidene)ammonium chloride (C.I. basic blue 26)
6786-83-0	(4-anilino-1-naphthyl){bis[4-(dimethylamino)phenyl]}methanol (C.I. solvent blue 4)
561-41-1	bis[4-(dimethylamino)phenyl][4-(methylamino)phenyl]methanol
1163-19-5	decabromo-1,1'-oxybis(benzene)
72629-94-8	perfluorotridecanoic acid
307-55-1	perfluorododecanoic acid
2058-94-8	perfluoroundecanoic acid
376-06-7	perfluorotetradecanoic acid
123-77-3	C,C'-diazenediyldimethanamide
85-42-7	8-oxabicyclo[4.3.0]nonane-7,9-dione
13149-00-3	rel-(3aR,7aS)-hexahydroisobenzofuran-1,3-dione
14166-21-3	rel-(3aR,7aR)-hexahydroisobenzofuran-1,3-dione
25550-51-0	methyl-8-oxabicyclo[4.3.0]nonane-7,9-dione
19438-60-9	3-methyl-8-oxabicyclo[4.3.0]nonane-7,9-dione
48122-14-1	1-methyl-8-oxabicyclo[4.3.0]nonane-7,9-dione
57110-29-9	2-methyl-8-oxabicyclo[4.3.0]nonane-7,9-dione
AL61	4-nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]
AL62	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated - [covering well-defined substances and UVCB substances, polymers and homologues]
625-45-6	2-methoxyacetic acid
68-12-2	N,N-dimethylformamide
683-18-1	dibutan-1-yl(dichloro)stannane
1317-36-8	lead oxide
1314-41-6	trilead tetraoxide
13814-96-5	lead bis(tetrafluoroborate)
1319-46-6	dicarbonato(dihydroxy)trilead
12060-00-3	lead titanium trioxide
12626-81-2	lead titanium zirconium trioxide
11120-22-2	silicic acid, lead salt
68784-75-8	silicic acid (H2Si2O5), barium salt (1:1), lead-doped
106-94-5	1-bromopropane

SubstanceGroup No./CAS No. etc	Substance Name
75-56-9	2-methyloxirane
84777-06-0	dipentyl phthalate, branched and linear
605-50-5	diisopentyl phthalate
776297-69-9	isopentyl pentyl phthalate
629-14-1	1,2-diethoxyethane
51404-69-4	acetic acid, lead salt, basic
12036-76-9	dilead oxide sulfate
69011-06-9	dioxo(phthalato)trilead
12578-12-0	dioxo(distearato)trilead
91031-62-8	fatty acids, C16-18, lead salts
20837-86-9	cyanamide, lead(2+) salt (1:1)
10099-74-8	lead dinitrate
12065-90-6	pentalead tetraoxide sulfate
8012-00-8	C.I. pigment yellow 41
62229-08-7	sulfurous acid, lead salt, dibasic
78-00-2	tetraethyllead
12202-17-4	dioxo(distearato)trilead
12141-20-7	trilead dioxide phosphonate
110-00-9	furan
64-67-5	diethyl sulphate
77-78-1	dimethyl sulphate
143860-04-2	3-ethyl-2-isopentyl-2-methyl-1,3-oxazolidine
88-85-7	2-sec-butyl-4,6-dinitrophenol
838-88-0	2,2'-dimethyl-4,4'-methylenedianiline
101-80-4	4,4'-oxydianiline
60-09-3	4-(phenyldiazenyl)aniline
95-80-7	4-methyl-1,3-phenylenediamine
120-71-8	2-methoxy-5-methylaniline
92-67-1	biphenyl-4-ylamine
97-56-3	2-methyl-4-(2-tolyldiazenyl)aniline
95-53-4	o-toluidine
79-16-3	N-methylacetamide
7440-43-9	cadmium
1306-19-0	cadmium(Ⅱ) oxide
131-18-0	dipentan-1-yl phthalate (DPP)
AL63	4-nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof]
3825-26-1	ammonium 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctanoate
335-67-1	2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctanoic acid
1306-23-6	cadmium sulfide
84-75-3	dihexan-1-yl phthalate
573-58-0	disodium 3,3'-(biphenyl-4,4'-diyldidiazene-2,1-diyl)bis(4-aminonaphthalene-1-sulfonate)
1937-37-7	disodium 4-amino-3-[{4'-[(2,4-diaminophenyl)diazenyl]biphenyl-4-yl}diazenyl]-5-hydroxy-6-(phenyldiazenyl)naphthalene-2,7-disulfonate
96-45-7	imidazolidine-2-thione
301-04-2	lead(II) acetate
25155-23-1	tris(dimethylphenyl) phosphate
10108-64-2	cadmium(II) chloride
68515-50-4	di(branched and linear hexyl) phthalate
7632-04-4	sodium perborate
15120-21-5	sodium perborate

SubstanceGroup No./CAS No. etc	Substance Name
11138-47-9	sodium salt of perboric acid
7790-79-6	cadmium(II) fluoride
10124-36-4	cadmium salt of sulfuric acid (1:1)
31119-53-6	cadmium salt of sulfuric acid (1:1)
3846-71-7	2-(2H-1,2,3-benzotriazol-2-yl)-4,6-di-tert-butylphenol (UV-320)
25973-55-1	2-(2H-1,2,3-benzotriazol-2-yl)-4,6-di-tert-pentylphenol (UV-328)
15571-58-1	bis(2-ethylhexan-1-yl) 2,2'-[(dioctan-1-ylstannanediyl)bis(sulfanediyl)]diacetate
AL55	reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)
117-81-7	bis(2-ethylhexan-1-yl) phthalate (DEHP)
68515-51-5	bis[alkyl(C=6-10)] phthalate
68648-93-1	mixture of bis[alkyl(C=6,8,10)] phthalate
AL64	5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual isomers of [1] and [2] or any combination thereof]
1120-71-4	1,2-oxathiolane 2,2-dioxide
3864-99-1	phenol, 2-(5-chloro-2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)- (UV-327)
36437-37-3	phenol, 2-(2H-benzotriazol-2-yl)-4-(1,1-dimethylethyl)-6-(1-methylpropyl)- (UV-350)
98-95-3	nitrobenzene
375-95-1	perfluorononan-1-oic acid
21049-39-8	sodium heptadecafluorononanoate
4149-60-4	perfluorononan-1-oic acid (2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-heptadecafluorononanoic acid and its sodium and ammonium salts
50-32-8	benzo[a]pyrene
80-05-7	4,4’-isopropylidenediphenol
AL65	4-heptylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]
335-76-2	nonadecafluorodecanoic acid
3830-45-3	sodium nonadecafluorodecanoate
3108-42-7	ammonium nonadecafluorodecanoate

SubstanceGroup No./CAS No. etc	Substance Name
80-46-6	p-(1,1-dimethylpropyl) phenol
AL67	perfluorohexane-1-sulphonic acid
AL68	reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) [with ≥0.1% w/w 4-heptylphenol, branched and linear]
540-97-6	dodecamethylcyclohexasiloxane (D6)
107-15-3	ethylenediamine
61788-32-7	terphenyl hydrogenated
552-30-7	Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride) (TMA)
50	Substances placed on GADSL

To: Suppliers Date:

Communication on Environmentally Hazardous Substances Contained in Products

We wish to thank you for your usual cooperation.

While the environmental problem increases its seriousness in recent years, demands on business entities are also increasing as to their social responsibilities and ethical performances. Operations of laws related to environmental regulation are also becoming severer.

Based on such circumstances, we intend to maintain the policy of going thorough on non-use of substances having risks of affecting the environment (environmentally hazardous substances). We would, therefore, kindly ask you to submit the environmentally hazardous substance inclusion report on all products or parts we purchase directly or through third parties from you, your subsidiaries and affiliated companies, to promise us that your products do not contain the prohibited substances. Would you, therefore, please put your signature on the appended "Agreement in Relation with Works on Environment", and return it to us?

If the above document cannot be returned, or although it is returned, if any fact breaching, or having a possibility of breaching the description of what you have promised with us is found, this could lead to a case that we can no longer continue business transactions with you, to which please kindly understand.

With my best regards,

Very sincerely yours,

Alps Electric Co., Ltd.

Alps Electric Co., Ltd. Date:

Agreement in Relation with Works on Environment

Company name: _____
Supplier code: _____
Address: _____
Telephone No.: _____
Representative product: _____
Responsible person
Title/Department: _____
Name: _____
Person in charge
Title/Department: _____
Name: _____
Telephone No.: _____
Fax: _____
e-mail: _____

We guarantee that we observe your "Green Procurement Standards" (hereinafter referred to as the Standards), and that the prohibited substances defined in the Standards shall not be contained in the products or parts (including accessories, packaging, and all other items delivered together with the products, hereinafter referred to the parts) as delivered by our company (including our subsidiaries, and affiliated companies, which shall apply hereinafter) either directly or through third parties to your company, your subsidiaries and affiliated companies (hereinafter referred to as your company).

In addition, in order to deliver the parts in compliance with the Standards, we are pleased to agree as described below:

1) We will execute the environmental evaluation on companies based on the provisions in the Standards, and submit to you the "Environment Managing Company (Supplier) Self-assessment Sheet".
2) We will execute the parts evaluation based on the provisions in the standard, and submit to you the "Environmentally Hazardous Substance Inclusion Report", and the verification data requested by you (analytical data, component tables, and SDS.
3) When the Standards are revised due to amendments in laws or change in social circumstances, we will confirm the contents of the revision immediately, and if there are any parts that do not comply with the revised standard, we will report to you to that effect.
4) We will follow the matters of requests made by you from time to time according to the definitions given in the Standards.

Signature: _____

アルプスグループ環境憲章

基本理念

アルプスは地球社会の一員として、社会の持続可能な発展のため、
卓越した技術に支えられた事業活動とし社員行動を通じて、
美しい自然を守り、貴重な資源を大切にします。

行動指針

私たちはいつも環境保全に心掛け

1. 環境を意識した製品開発に取組みます
2. 環境にやさしい生産・販売に取組みます
3. モノを大切にします
4. ムダを省きます
5. リサイクルに努めます

The Alps Group Environmental Charter

Basic Philosophy

Alps, as a member of the global community, is committed to protecting the beauty of nature and to safeguarding our precious resources through the use of technologically advanced business practices and the efforts of its employees, in order to promote sustainable development.

Action Program

Placing priority on environmental preservation, we at Alps will:

1. Develop products in light of environmental concerns
2. Engage in environmentally friendly production and sales
3. Conserve our natural resources
4. Reduce or eliminate waste
5. Increase recycling activities

ALPS
アルプス電気株式会社
ALPS ELECTRIC CO., LTD.