Kyocera Guideline on Environmentally Hazardous Substances
(Brochure for Business Partners)

Revision 15

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[Contents]

This guideline explains the Kyocera group's basic criteria for green procurement. A guideline issued by the group company takes priority when it is separately available.

Additional instructions issued by any Kyocera Corporation business unit should be followed in addition to this guideline.

Preface

Since its foundation, Kyocera has carried out activities based on its corporate motto “Respect the Divine and Love People” and its management rationale “Contribute to the Advancement of Society and Humankind While Pursuing the Material and Spiritual Happiness of All Employees.”

Adhering to this management philosophy, Kyocera and its domestic and foreign affiliates have promoted the development and commercialization of solar cells and other products that contribute to global environmental preservation. Additionally, the Kyocera group has undertaken other active efforts for environmental preservation, including environmental management at its plants to reduce damage to the natural environment and adverse influences on the ecosystem.

In August 1998, Kyocera commenced efforts on the framework of its green procurement, which involves the selection of products to be procured on the basis of consideration of environmental issues. This move was due to our judgment that in order to reduce the environmental impact associated with our products, we needed to reduce such impacts attributed to parts built into the products, as well as materials procured by us. In December of the same year, we published our Guideline on Green Procurement, which outlines our approach to green procurement, our related requests to suppliers, and other relevant matters. Based on the Guideline, we have been successfully carrying out green procurement activities, thanks to the understanding and cooperation of our business partners.

We have divided our conventional “Kyocera Green Procurement Guideline” into two and established guidelines “Kyocera Guideline on Environmentally Hazardous Substances” that specifies the standards for product specifications for promoting green procurement and “Kyocera Guideline on Environmental Protection Activities (for Partners)” that describes the guiding principles for Kyocera’s idea of environmental protection activities.

Nowadays, legal regulations on environmental affairs as well as growing public demand for environmental protection have been more and more strengthened. We need cooperation of our business partners for complying with their requirements.

Accordingly, we ask for your understanding of the purposes of these activities, as well as your cooperation in this regard.

Kyocera Group Environmental and Safety Policy

Since Kyocera was founded, under the company motto of "Keiten Aijin," We has established a management philosophy "To provide opportunities for the material and intellectual growth of all our employees, and through our joint efforts, contribute to the advancement of society and humankind.", and in addition to complying with laws and regulations on environmental safety, requirements agreed to by our company, and our own standards, we will continue to take on challenges to solve social issues through communication with various stakeholders, participation and support in social contribution activities, by useing the technology and know-how we have cultivated.

1. Ensuring the safety and health of employees

・To create a safe and secure workplace for all employees, we will create a corporate culture in which everyone involved in our business activities is fully engaged.

・Kyocera will conduct risk assessments and reduce occupational health and safety risks by eliminating sources of danger in order to prevent workplace accidents and disasters.

・Kyocera strives to build a work environment where employees feel healthy, enjoy job satisfaction and can reach their maximum potential by promoting mental and physical health.

2. Contribution to a sustainable society

・Kyocera will research, develop, disseminate and expand products that contribute to the improvement of the global environment and products that reduced environmental impact throughout their life cycles.

・Kyocera will promote greenhouse gas emission control in the entire value chain to contribute to the realization of a carbon-free society.

・Kyocera will contribute to the realization of a recycling-oriented society by using resources more efficiently.

・Kyocera will strive to prevent environmental pollution by properly managing chemical substances in all processes.

・Kyocera will advance conservation of biodiversity by minimizing negative impacts on the natural environment, as well as by protecting and nurturing the natural environment.

3. Operation of environmental and safety management system

・In the course of business activities, through operation of the management system, the Kyocera Group will proactively promote comprehensive measures for environmental protection and work safety, based on the management rationale, and continuously improve environmental and safety performance.

Kyocera's Guideline on Environmentally Hazardous Substances

1. Objective

The purpose of this Guideline is to specify the chemical substance prohibited or to be managed in raw materials, parts (general purchased products, outsourced products), packing materials, production facilities and so forth Kyocera purchases so that the information we would like our partners to observe is clarified and that the environment-related laws and regulations are observed thoroughly.
We ask our partners to implement environmental load reduction activities according to this Guideline.

2. Scope

(1) The Guideline covers those businesses that supply materials and other articles to Kyocera (comprising vendors and outsourcing businesses).

(2) It also covers raw materials, parts (that are either available on the market or custom-made through outsourcing), package materials, production facilities and etc. procured by Kyocera. The Company will provide suppliers with a list of articles for which chemical substance contents etc. should be surveyed.

3. Definition of Terms

(1) Substances that Exert an Environmental Load
This term refers to prohibited chemical substances (ranks A and B), and to controlled chemical substances (rank C).

(2) Prohibited Chemical Substances (Rank A)
This term refers to those chemical substances that must not be contained in any articles, and whose use in manufacturing processes is prohibited. These substances are listed in Table 1.

(3) Prohibited Chemical Substances (Rank B)
This term refers to those chemical substances that must not be contained in any articles. These substances are listed in Table 2. Some rank B prohibited chemical substances will be prohibited immediately after the issue of the Guideline. Other rank B chemical substances will be prohibited after the elapse of a certain period following the issue of the Guideline. For some substances in this category, provisions may be made to limit their application or specify threshold values.

(4) Controlled Chemical Substances (Rank C)
Since neither an alternative material or technology have been established, this term refers to those chemical substances that may be used intentionally, on condition that the status of their use is monitored, and that due consideration is given to recycling and other steps for appropriate management. These substances are listed in Table 2.

(5) Intentional Use
This term refers to the conscious addition of a substance by a manufacturer, or the use of a material with a substance added, to create a basic raw material that is added as an ingredient to a product, to achieve a targeted performance or function, or to maintain desirable conditions etc. in a certain process.

(6) Contain (Contained/Content)
This term refers to the following cases:

(i) When a chemical substance is included in a part, material or product as an ingredient, whether intentionally or not;

(ii) When a chemical substance is mixed with other ingredients to maintain desirable

conditions, quality etc. in a production process, and thus becomes included in a part, material or product;

(iii) When a chemical substance is used in a production process, and remains in, or sticks to, the finished product, part, material or other.

According to our interpretation, the term also refers to cases in which a chemical substance is contained in a natural material, or in which impurities remain after the completion of an industrial refining process. Such chemical substances are not regarded as contained in an article if such containment at any significant level is not technically anticipated, or if no information on such contents is available; however, this does not apply if such containment is problematic in view of relevant domestic and/or foreign regulations.

(7) Impurity

This term refers to the following:

(i) Substances contained in natural materials that cannot be removed completely using existing technology in a process in which the materials are refined for industrial use;

(ii) Substances generated during a chemical synthesis reaction that cannot be removed completely using existing technology;

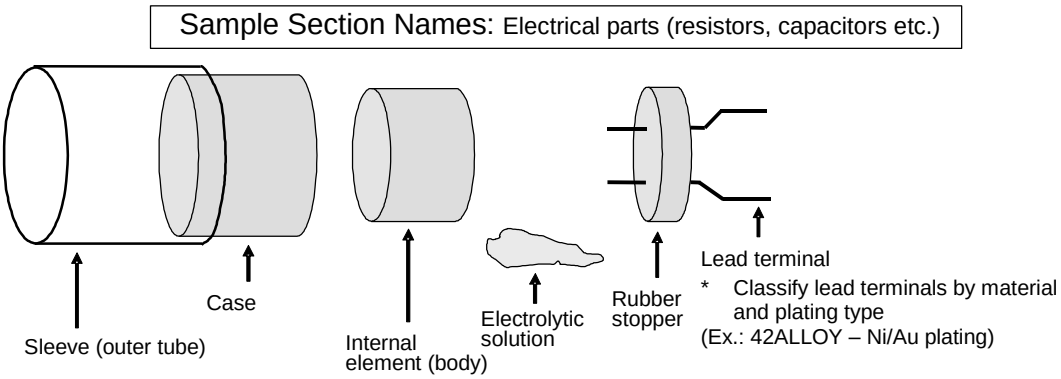
(iii) Substances (generally referred to as dopants) that are mixed with other ingredients in the manufacture of semiconductor ICs to control semiconductor characteristics.

(8) Threshold

This term refers to the allowable content in an application.
Indicates the boundary value for concentration.

(9) Section (Relevant Section)

This term refers to a section containing certain chemical substances that are deemed to be uniform in property. “Relevant section” refers to the section of a part that contains the surveyed chemical substances.



(10) SDS

This term refers to Material Safety Data Sheet describing the properties and handling of chemical substances etc. in conformity with the provisions of the PRTR Law (Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in their Management), Industrial Safety and Health Law and PDSC Law (Poisonous and Deleterious Substances Control Law).

(11) Minerals
This term refers to naturally produced minerals that have inorganic crystal structure.

(12) Substance (chemical substance)
This term refers to an individual chemical substance.
Ex. lead oxide, nickel chloride, benzene, etc.

(13) Mixture
This term refers to a mixture (including solvent) intentionally comprising two or more individual chemical substances.
Ex. Paints, inks, solders prior to use, adhesives, alloys, plating material, detergent, etc.

(14) Article (product formed into a shape)
This term refers to an item of specific shape, surface, or design provided during manufacture which determines functions in final use at a level beyond that provided by its chemical composition.
Ex. Capacitors, LSIs, lead frames, screws, etc.

4. Concept for environmental management on purchased products

a. Control of Chemical Substances Contained in Purchased Articles
The contained chemicals will be checked by obtaining data in accordance with various forms of our specification (see Section 5, Table 1), and managed thoroughly depending on the hazardousness and so forth.

b. Consideration of the Environmental Impacts of Purchased Equipment
When introducing equipment, we determine specifications after considering environmental impact. Further, when installing equipment, we control operational status thoroughly at the same time as confirming its specifications.

c. Specifications of Packaging Materials Used for Purchased Articles
We endeavor to reduce the amount of package materials used, promote the reuse of such materials, and introduce new materials that can be recycled more easily.
Additionally, we prohibit the intentional inclusion, including impurities harmful substances (※1), as well as exterior package/cushioning materials made of vinyl chloride.

*1 Hazardous Substances

Mercury and its compounds	Organic phosphorous compounds	Cyanogen compounds	Tetrachloroethylene
Cadmium and its compounds	Hexavalent chromium compounds	PCB	1,1,1-trichloroethane
Lead and its compounds	Arsenic and its compounds	Trichloroethylene	Carbon tetrachloride

d. Material Marking of Purchased Articles
To reduce environmental impact, we promote material marking for purchased resin-based articles by designating the specifications of the articles and holding discussions with business partners. This step is aimed at furthering the recycling of purchased articles through sorting at the time of disposal.

5. Submission of information on environmental hazardous substances included in procured products

Regarding the specific subject products for which investigation on chemicals is required as well as the forms for information on environmentally hazardous substances (see Table 1) to be prepared by our partners, we will present them through the information management system on chemical substances contained in products (EARTHs) and so forth.

In addition, we may ask you to prepare information in forms that are specified uniquely by our business divisions besides the [common] forms.

[Table 1: Submitted documents for information on substances of environmental concerns]

Submitted documents		Need or no-need of submission		Remarks
Form No.	Title of the form	Chemical substance and preparation	Article*1	
Form 2	Warranty of non-use Prohibited Chemical Substances	Submission is necessary.	Submission is necessary.	
-	Report on Constituent Contents	Submission is necessary.	Submission is necessary.	Which could be used, Environmentally Hazardous Substances SurveyTool (JAMP format) or Report on Constituents, will be notifiy.
Form 3	Environmentally Hazardous Substances Survey Tool (JAMP format)			
-	chemSHERPA CI	Need or no-need of submission will be notified		*2
-	chemSHERPA AI		Need or no-need of submission will be notified	*2
-	SDS	Submission is necessary.	Submission is necessary.	
-	Analysis data	Need or no-need of submission will be notified.	Need or no-need of submission will be notified.	Target products necessary for analysis data and detailed analysis methods will be notified.
Form 4	Certificate of constituent Contents	Need or no-need of submission will be notified.	Need or no-need of submission will be notified.	This is a format submitted to guarantee each delivery lot. Details will be notified.
Form 5	Application for change	Submission is necessary.	Submission is necessary.	

*1: Packaging materials for our products delivered to our customers are included, too.

*2: The JAMP MSDSplus/AIS download service has been terminated as of the end of June 2018, so please use the chemSHERPA tool to answer this question.

[Explanation of submitted documents]

■ Warranty of non-use Prohibited Chemical Substances (Form 2)

This form is to certificate the no containing of the Prohibited Chemical Substances (Rank A or B) listed in Kyocera Environmentally Hazardous Substances Guideline as well as nonuse of Prohibited Chemical Substances of Rank A in manufacturing processes.

■Survey Response Tools (JAMP format)

Report information on chemical substances contained in the products delivered to our company by the use of the JAMP format. Incidentally, submit the survey format when we request and when constituent materials are changed. .

[Report Criteria]

a. Chemical substances added intentionally, or detected to be contained in any amount.

b. Chemical substances that are not added intentionally, but contained as impurely.

■JAMP chemSHERPA CI, AI

Report information on chemical substances contained in the products delivered to our company by the following tools;

Chemical substances and preparation =>Use the chemSHERPA CI

Article => Use the chemSHERPA AI

Incidentally, submit the survey format when we request and when constituent materials are changed.

[Report Criteria]

a. Chemical substances added intentionally, or detected to be contained in any amount.

b. Chemical substances that are not added intentionally, but contained as impurely.

■ Report of Constituent Contents (attached Form 3)

Two types of formats are available, one for “chemical substance” and “preparation” and the oth er for “articles”.

Report all the constituents that form products delivered to our company by the use of Report on Constituent Contents (Forms 3-1 and 3-2). Incidentally, submit the report when any material is newly adopted, when constituent material is changed, and when we request.

[Report Criteria]

a. Chemical substances added intentionally, or detected to be contained in any amount.

b. Chemical substances that are not added intentionally, but contained as impurely.

(If content ratio is not identified but the substance may be contained as impurities, report the substance name only.)

■ SDS

Submit SDS complied with the PRTR Law, Industrial Safety and Health Law, and PDSC Law.

■ Analysis Data

Include “analysis method, pre-conditioning method, analysis equipment manufacturers, equipment No., method detection limit, calibration curve data, and analysis report” in the analysis data.

The analysis methods, in principle, comply with those declared in Attached Table 2, but can be accepted if combinations of pre-conditioning and analysis equipment can certificate that method detection limit is lower than the thresholds prescribed in Attached Table.

Submit the analysis data when any material is newly adopted, when constituent material is changed, and when we request.

■ Certificate of Constituent Contents (Form 4)

Make sure the relevant delivered lot can certificate the following content and enter the content that corresponds to the following with the inspection report, etc. of the members to be delivered:

"We hereby certify that this content is same as the content of the on Environmentally Hazardous Substances Survey Tools (JAMP format) or the content of the Report on Constituent Contents submitted on MM/DD/YY."

For articles with no Inspection report etc., provided, please use attached Form 4 (Certificate of Constituent Contents).

■ Application for Change (Form 5)

If some of the contents of a delivered article have changed or if such a change is likely to take place (regarding material specifications, the supplier etc.), the change should be reported in advance by submitting the following documents:

(i) Application for Change (attached Form 5)

(ii) Documents already submitted, which need to be re-submitted as a result of the change.

In the event that the present guidelines are changed because of changes in law, ordinances, social circumstances, customer needs, and others, submit necessary documents that correspond to the content changed for goods continuously supplied.

6. Requests regarding management of four phthalates restricted by RoHS Directive and REACH Regulation

As you are aware, the four phthalates listed below were added to the list of restricted substances under the RoHS Directive in July 2019, and they also are restricted by the REACH Regulation from July2020.

-Dibutyl phthalate：DBP(CAS No84-74-2)

-Di (2-ethylhexyl) phthalate：DEHP(CAS No117-81-7)

-Butyl benzyl phthalate：BBP(CAS No85-68-7)

-Diisobutyl phthalate：DIBP(CAS No84-69-5)

The four phthalates are widely used as a plasticizer in products made of vinyl chloride or rubber, but contamination caused by their improper use or addition during manufacturing processes and contamination due to migration of the plasticizer are matters of concern. For this reason, it is necessary to ensure thorough management throughout the supply chain.

(1) Preventing contamination due to improper use and addition during manufacturing processes Even if the four restricted phthalates are replaced with alternative plasticizers, contamination of products using alternative plasticizers caused by the improper use or addition of the four restricted phthalates cannot be eliminated unless manufacturing processes, containers, etc. are separated according to the type of plasticizer used in the manufacturing processes of plasticizers, processes in which plasticizers are mixed with resin or raw materials of rubber, and molding processes of vinyl chloride and rubber.

When any of the four restricted phthalates and an alternative plasticizer are added using the same manufacturing processes, containers, etc., periodic inspections of the state of contamination will be required in addition to cleaning of the manufacturing processes, containers, etc.

We ask businesses that supply goods using a plasticizer to conduct proper management internally, and to also ensure thorough management by upstream processors and provide necessary support.

(2) Preventing contamination by migration during manufacturing processes

Because plasticizers do not form chemical bonds with vinyl chloride and rubber polymers, it is known that a plasticizer contained in a molded product "migrates" to another molded product under certain conditions.

For this reason, it is necessary to be vigilant against unintended contamination by migration. If businesses or upstream processors use anti-static mats, jigs, tools, rubber gloves, vinyl bags, etc. containing any of the four restricted phthalates in the form of a plasticizer in their manufacturing processes or for shipping purposes, and if a product comes in direct contact with any of them, the plasticizer may migrate to the product.

To minimize the risk of contamination, any anti-static mats, jigs, tools, rubber gloves, vinyl bags, etc. containing any of the four restricted phthalates in the form of a plasticizer should be removed from manufacturing processes and items used for shipping purposes. If this is difficult, please conduct appropriate management to make sure that, even if migration occurs through contact, no homogeneous material contains any of the four restricted phthalates above 1,000 ppm. In addition, please ensure thorough management by upstream processors and provide necessary support.

7. Transmission to secondary partners

(1) When the Partner is a Manufacturer

If a manufacturer with whom we have a business relationship procures parts or materials from other producers to produce articles for delivery to us, or if the manufacturer entrusts another business with the finishing of an article, the manufacturer is asked to direct the producer or business to carry out Environmentally hazardous substance management activities in accordance with this Guideline and confirm that such activities fulfill related requirements. Additionally, the manufacturer is requested to provide all necessary support to producers and businesses in this regard.

(2) When the Partner is a Trading Company

Any trading company with whom we have a business relationship is asked to communicate this Guideline to manufacturers from whom it purchases articles for delivery to us. As well, trading companies are requested to direct such manufacturers to carry out Environmentally hazardous substance management activities in accordance with the Guideline. Additionally, trading companies should collect information on the status of compliance with the Guideline from such manufacturers, and provide this information to us.

8. Others

We make the information submitted from your company available in Kyocera Corporation and use for control of environmental hazardous substance and for answer customer's inquires. In addition, we may communicate the information from your company to third party as Kyocera's information for compliance with law.

[Contact] Kyocera Corporation
Corporate Environment Group, Environmental Division:
kan.green01@kyocera.jp

[Table 1] List of Prohibited Substances (Rank A)

No	Substance group	Substance group Relevant laws, ordinances etc.
1	CFCs (Annex A Group I substances in the Montreal Protocol)	Ozone Layer Protection Law (Specific Substances)*2
2	Halons (Annex A Group II substances in the Montreal Protocol)	
3	Other CFCs (Annex B Group I substances in the Montreal Protocol)	
4	Carbon tetrachloride (Annex B Group II substance in the Montreal Protocol)	
5	1.1.1-trichloroethane (Annex B Group III substance in the Montreal Protocol)	
6	Bromochloromethane (Annex C Group III substance in the Montreal Protocol)	
7	Methyl bromide (Annex E substance in the Montreal Protocol)	
8	HBFCs (Annex C Group II substances in the Montreal Protocol)	
9	HCFCs (Annex C Group I substances in the Montreal Protocol)	

Note 1: This Guideline does not cover Prohibited Substances (rank A) not used directly in production processes.

*1: This is a number assigned to each substance group by JGPSSI for classification of the substance.
*2: Details of Specific Substances in the Ozone Layer Protection Law are shown in Table 4

[Table 2] List of Prohibited/Controlled Chemical Substances (Rank B/C)

Classification	No.	Substance group	Rank	Applications	Threshold value *1	Date of restriction	Remarks
Metals and metal compounds	1	Cadmium and cadmium compounds					IEC62474 *12
			B	Paints, inks, plastics, package materials *2	5ppm	Immediate	
			B	Solder	20ppm	Immediate	
			B	Batteries installed to Kyocera's products and shipped to Kyocera's customer.	*3	Immediate	
			B	Cadmium and its compounds in one shot pellet type thermal cut-offs	100ppm	Immediate	
			B	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	100ppm	Immediate	
			B	Applications other than those for rank B (paints, inks, plastics, package materials, solder) and rank C [metals that contain zinc (zinc die cast, galvanizing, etc.)]	100ppm	Immediate	
			B	Cadmium in photoresist for analog opto-coupler to be used for professional audio equipment.	100ppm	Immediate	
			B	Cadmium alloys as electrical/mechanical solder joints to electrical conductors located directly on the voice coil in transducers used in highpowered loudspeakers with sound pressure levels of 100 dB (A) and more.	100ppm	Immediate	
			B	Cadmium and cadmium oxide in thick film pastes used on aluminium bonded beryllium oxide.	100ppm	Immediate	
			B	Cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses	100ppm	Immediate	
			C	-Cadmium and its compounds in electrical contacts used in: - circuit breakers, - thermal sensing controls, - thermal motor protectors (excluding hermetic thermal motor protectors), - AC switches rated at:6 A and more at 250 V AC and more, or 12 A and more at 125 V AC and more, - DC switches rated at 20 A and more at 18 V DC and more, - switches for use at voltage supply frequency ≥ 200 Hz. -Cadmium in striking optical filter glass types; excluding applications falling under point 39 of this Annex -Cadmium in glazes used for reflectance standards	—	—	
			[Exceptions] Substances in equipment, tools, jigs, dies etc., when there is no possibility of their becoming contained in any products (Ex.: cadmium contained in a die (silver braze) for press working)				
			(Analysis method) (a) Simple analysis (screening measurement) [Method] X-ray fluorescence spectroscopy [Equipment] Energy Dispersive X-ray Fluorescence Spectrometer and wave length dispersive X-ray Fluorescence Spectrometer [Summary] After cutting and pulverizing samples, collect samples of a predetermined volume and weight and guide them into the analysis equipment; this enables analysis as to whether or not cadmium is contained as well as the order analysis in a simplified manner. This is suited for analysis of resin, rubber, metal, glass, ceramic members. Using semi-quantitative analysis software (fundamental parameter method) and quantitative analysis software (calibration curve method) incorporated in the equipment, measure the content. (b) Detailed analysis (quantitative analysis) [Method] ICP optical emission spectrometry [Equipment] ICP optical emission spectrometer (ICP-OES), ICP mass spectrometer (ICP-MS), atomic absorption spectrometer (AAS) [Summary] Completely dissolve and analyze samples. In the event that any residue is generated, completely dissolve by an alkali fusion method, etc. Introduce the prepared solution sample into the ICP-OES and from the calibration curve prepared by the standard solution, measure the concentration of cadmium in the solution sample, and convert into the cadmium content in solid samples.			
	2	Hexavalent chromium compounds					IEC62474 *12
			B	Package materials *2	100ppm	Immediate	
			B	Applications other than those for rank B (package materials) and rank C [rustproof treatment on plating surface, element of ink and paints]	1000ppm	Immediate	
			B	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.	1000ppm	Immediate	
			[Exceptions] Substances in equipment, tools, jigs, dies etc., when there is no possibility of their becoming contained in any products				
			(Analysis method) (1) Simple analysis (screening measurement) [Method] X-ray fluorescent spectroscopy [Equipment] Energy Dispersive X-ray Fluorescence Spectrometer and wave length dispersive X-ray Fluorescence Spectrometer [Summary] After cutting and pulverizing samples, collect samples of a predetermined volume and weight and guide them into the analysis equipment; this enables analysis as to whether or not chromium is contained as well as the order analysis in a simplified manner. This is suited for analysis of resin, rubber, metal, glass, ceramic members. Using semi-quantitative analysis software (fundamental parameter method) and quantitative analysis software (calibration curve method) incorporated in the equipment, measure the content. This method is not intended to measure the amount of hexavalent chromium but to measure the amount of chromium. (2) Detailed analysis (quantitative analysis) [Method] Diphenylcarbazide absorption photometry [Equipment] Absorptiometer, ion chromatography equipment [Summary] After extracting samples by boiling water, submit the extract solution to the analysis. After extracting by the alkali solution, dilute with ion-exchange water until a constant weight is reached. Selectively determine hexavalent chromium contained in the assay sample solution using diphenylcarbazide absorption photometry and ion chromatography. From the calibration curve prepared by the standard solution, measure the concentration of hexavalent chromium in the solution sample and convert into the hexavalent chromium content in the sample.			

Classification	No.	Substance group	Rank	Applications	Threshold value *1	Date of restriction	Remarks
Metals and metal compounds	3	Lead and lead compounds	B	Paints, inks, plastics, package materials *2	100ppm	Immediate	IEC62474 *12
			B	Batteries installed to Kyocera's products and shipped to Kyocera's customer.	*3	Immediate	
			B	Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC.	1000ppm	Immediate	
			B	Lead used in C-press compliant pin connector systems.	1000ppm	Immediate	
			B	Lead used in other than C-press compliant pin connector systems.	1000ppm	Immediate	
			B	Lead in solders consisting of more than two elements for the connection between the pins and the package of microprocessors with a leadcontent of more than 80 % and less than 85 % and the package of microprocessors with a leadcontent of more than 80 % and less than 85 % by weight.	1000ppm	Immediate	
			B	Lead in linear incandescent lamps with silicate coated tubes.	1000ppm	Immediate	
			B	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 $MgSi_2O_7$:Pb).	1000ppm	Immediate	
			B	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).	1000ppm	Immediate	
			B	Lead oxide in glass used for bonding front and rear substrates of flat fluorescent lamps used for Liquid Crystal Displays (LCDs).	1000ppm	Immediate	
			B	Lead in finishes of fine pitch components other than connectors with a pitch of 0.65 mm and less.	1000ppm	Immediate	
			B	Lead oxide in the glass envelope of black light blue lamps.	1000ppm	Immediate	
			B	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.	1000ppm	Immediate	
			B	Applications other than those for rank B (paints, inks, plastics, package materials) and rank C [surface treatment and solders for external electrodes and lead terminals of components]	1000ppm	Immediate	
			B	The PZT lead-based dielectric ceramic capacitor to be used for discrete components, in an integrated circuit device (lead zirconate titanate)	1000ppm	Immediate	
			B	Lead in bearing shells and bushes for refrigerant-containing compressors for heating, ventilation, air conditioning and refrigeration (HVACR) applications.	1000ppm	Immediate	
			B	Lead halide as radiant agent in high intensity discharge (HID) lamps used for professional reprography applications.	1000ppm	Immediate	
			B	Lead oxide in surface conduction electron emitter displays (SED) used in structural elements, notably in the seal frit and frit ring.	1000ppm	Immediate	
			B	Lead in soldering materials in mercury free flat fluorescent lamps (which e.g. are used for liquid crystal displays, design or industrial lighting).	1000ppm	Immediate	
			B	Lead in solders for the soldering of thin copper wires of 100 µm diameter and less in power transformers.	1000ppm	Immediate	
			B	Lead in glass of cathode ray tubes.	1000ppm	Immediate	
			B	Lead in solders for servers, storage and storage array systems, Network infrastructure equipment for switching, signalling, transmission, and network management for telecommunications.	1000ppm	Immediate	
			B	Lead in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses.	1000ppm	Immediate	
			B	Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body.	1000ppm	Immediate	
			C	- Electroless nickel/gold plating; electrolytic gold plating; parts, materials and chemicals used for such plating; - Lead in glass of fluorescent tubes not exceeding 0.2 % by weight . - Lead as an alloying element in steel for machining purposes and in galvanised steel containing up to 0.35 % lead by weight. -Lead as an alloying element in aluminium containing up to 0.4 % lead by weight. - Copper alloy containing up to 4 % lead by weight. - Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead). - 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. - Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher. - Lead in white glasses used for optical applications. - Lead in filter glasses and glasses used for reflectance standards. - Lead in ion coloured optical filter glass types - lead in glazes used for reflectance standards - Lead in solders to complete a viable electrical connection between the semiconductor die and carrier within integrated circuit flip chip packages where at least one of the following criteria applies: - a semiconductor technology node of 90 nm or larger; - a single die of 300 mm2 or larger in any semiconductor technology node; - stacked die packages with die of 300 mm2 or larger, or silicon interposers of 300 mm2 or larger.	–	–	

Classification	No.	Substance group	Rank	Applications	Threshold value *1	Date of restriction	Remarks
Metals and metal compounds	3	Lead and lead compounds					IEC62474 *12
			C	- 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) - Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors. - Lead bound in crystal glass as defined in Annex I (Categories 1,2,3 and 4) of Council Directive 69/493/EEC(1). - Lead in cermet-based trimmer potentiometer elements.	—	—	
			[Exceptions] Substances in equipment, tools, jigs, dies etc., when there is no possibility of their becoming contained in any products.				
			(Analysis method) (1) Simple analysis (screening measurement) [Method] X-ray fluorescent spectroscopy [Equipment] Energy Dispersive X-ray Fluorescence Spectrometer and wave length dispersive X-ray Fluorescence Spectrometer [Summary] After cutting and pulverizing samples, collect samples of a predetermined volume and weight and guide them into the analysis equipment; this enables analysis as to whether or not lead is contained as well as the order analysis in a simplified manner. This is suited for analysis of resin, rubber, metal, glass, ceramic members. Using semi-quantitative analysis software (fundamental parameter method) and quantitative analysis software (calibration curve method) incorporated in the equipment, measure the content. (2) Detailed analysis (quantitative analysis) [Method] ICP optical emission spectrometry [Equipment] ICP optical emission spectrometer (ICP-OES), ICP mass spectrometer (ICP-MS), atomic absorption spectrometer (AAS) [Summary] Completely dissolve and analyze samples. In the event that any residue is generated, completely dissolve by an alkali fusion method, etc. Introduce the prepared solution sample into the ICP-OES, and from the calibration curve prepared by the standard solution, measure the concentration of lead in the solution sample, and convert into the lead content in solid			
	4	Mercury and mercury compounds					IEC62474 *12
			B	Paints, inks, plastics, package materials *2	100ppm	Immediate	
			B	Batteries installed to Kyocera's products and shipped to Kyocera's customer.	*3	Immediate	
			B	- Mercury in other fluorescent lamps not exceeding (per lamp) -Linear halophosphate lamps with tube > 28 mm (e.g. T10 and T12): 10 mg	1000ppm	Immediate	
			B	- Mercury in other fluorescent lamps not exceeding (per lamp) Non-linear halophosphate lamps (all diameters): 15 mg	1000ppm	13/04/2016	
			B	Mercury in High Pressure Mercury (vapour) lamps (HPMV)	1000ppm	13/04/2015	
			B	Mercury used as a cathode sputtering inhibitor in DC plasma displays with a content up to 30 mg per display.	1000ppm	Immediate	
			B	Applications other than those for rank B (paints, inks, plastics, package materials) and rank C	1000ppm	Immediate	
			B	Mercury in single capped (compact) fluorescent lamps not exceeding (per burner): ・For general lighting purposes < 30 W: 2.5 mg ・For general lighting purposes ≥ 30 W and < 50 W: 3.5 mg ・For general lighting purposes ≥ 50 W and < 150 W: 5 mg ・For general lighting purposes ≥ 150 W: 15 mg ・For general lighting purposes with circular or square structural shape and tube diameter ≤ 17 mm:7 mg ・For special purposes: 5 mg	1000ppm	Immediate	
			B	Mercury in double-capped linear fluorescent lamps for general lighting purposes not exceeding (per lamp): ・Tri-band phosphor with normal lifetime and a tube diameter < 9 mm:4 mg ・Tri-band phosphor with normal lifetime and a tube diameter ≥ 9 mm and ≤ 17 mm :3 mg ・Tri-band phosphor with normal lifetime and a tube diameter > 17 mm and ≤ 28 mm:3.5 mg ・Tri-band phosphor with normal lifetime and a tube diameter > 28 mm:3.5mg ・Tri-band phosphor with long lifetime (≥ 25 000 h): 5 mg	1000ppm	Immediate	
			B	Mercury in other fluorescent lamps not exceeding (per lamp): ・Non-linear tri-band phosphor lamps with tube diameter > 17 mm:15mg	1000ppm	Immediate	
			B	Mercury in other low pressure discharge lamps (per lamp) :15mg	1000ppm	Immediate	
			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 ・P ≤ 155 W:30 mg ・155 W < P ≤ 405 W:40 mg ・P > 405 W:40mg	1000ppm	Immediate	
			C	・ Mercury in other fluorescent lamps not exceeding (per lamp): ・Lamps for other general lighting and special purposes (e.g. induction lamps):15mg ・Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes not exceeding (per lamp): ・Short length (≤ 500 mm):3.5 mg ・Medium length (> 500 mm and ≤ 1 500 mm): 5 mg ・Long length (> 1 500 mm):13 mg	—	—	

Classification	No.	Substance group	Rank	Applications	Threshold value *1	Date of restriction	Remarks
Metals and metal compounds	4	Mercury and mercury compounds					IEC62474 *13
			C	・Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner) in lamps with improved colour rendering index Ra > 80: P ≤ 105 W: 16 mg may be used per burner ・Mercury in other High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner): P ≤155 W: 20 mg ・155 W < P≤405 W: 25 mg ・P > 405 W:25mg Mercury in metal halide lamps (MH); Mercury in other discharge lamps for special purposes not specifically mentioned in rank C	—	—	
				[Exceptions] Substances in equipment, tools, jigs, dies etc., when there is no possibility of their becoming contained in any products.			
				(Analysis method) (1) Simple analysis (screening measurement) [Method] X-ray fluorescent spectroscopy [Equipment] Energy Dispersive X-ray Fluorescence Spectrometer and wave length dispersive X-ray Fluorescence Spectrometer [Summary] After cutting and pulverizing samples, collect samples of a predetermined volume and weight and guide them into the analysis equipment; this enables analysis as to whether or not mercury is contained as well as the order analysis in a simplified manner. This is suited for analysis of resin, rubber, metal, glass, ceramic members. Using semi-quantitative analysis software (fundamental parameter method) and quantitative analysis software (calibration curve method) incorporated in the equipment, measure the content. (2) Detailed analysis (quantitative analysis) [Method] ICP optical emission spectrometry [Equipment] ICP optical emission spectrometer combined with reduction aeration (ICP-OES), atomic absorption spectrometer combined with reduction aeration (AAS), ICP mass spectrometer (ICP-MS) [Summary] Using a decomposition flask equipped with a pressure-decomposer or reducing-cooler, prevent vaporization of mercury, decompose the sample by sulfuric acid or nitric acid, and bring the sample into solution. Measure the solubilized sample by ICP-OES. In the case of traces of mercury, measure mercury by ICP optical emission spectrometer combined with reduction aeration (ICP-OES) oratomic absorption spectrometer combined with reductionaeration (AAS) (in such event, coexisting elements may interfere and verification is required). From the calibration curve prepared by the standard solution, measure the concentration of mercury in the solution sample, and convert into the mercury content in solid samples.			
	5	Trisubstituted organotin compounds (including Bis (tri-n-butyltin) oxide (TBTO)tributyltin (TBT) compounds and triphenyltin (TPT) compounds)					IEC62474 *12 *9 REACH (Restriction)
			B	All applications	1000ppm	Immediate	
	6	Dibutyltin (DBT) compounds					IEC62474 *12 REACH (Restriction)
			B	If the concentration of DBT compounds exceeds 0.1wt%, upon calculation of Sn weight in the article and all related parts.	—	Immediate	
			C	All applications other than rank B.	—	—	
	7	Dioctyltin (DOT) compounds					IEC62474 *13
			B	The following products and parts used by the general public or the general public use,which containing the DOT over the 0.1Wt% in terms of weight of tin . ・Textile products for skin contact ・Gloves ・Part of the footwear or footwear for skin contact ・Wallpaper and floor agent ・RTV-2 mold kit	—	Immediate	IEC62474 *12 REACH (Restriction)
			C	All applications other than rank B.	—	—	
	8	Organotin compounds other than bis(tri-n-butyltin)oxide (TBTO), tributyltins (TBTs), triphenyltin (TPT), dibutyltin (DBT), dioctyltin (DOT) compounds					
			C	All applications	—	—	
	9	Cobalt dichloride					IEC62474 *12
			B	Cobalt dichloride contained in desiccant agent and/or humidity indicator that are shipped with Kyocera's products to Kyocera's customer.	—	Immediate	
			C	All applications other than rank B.	—	—	
	10	Antimony and antimony compounds					
			C	All applications	—	—	
	11	Arsenic and arsenic compounds					IEC62474 *12
			B	All applications <Chemical Substances> Diarsenic trioxide, Diarsenic pentaoxide	—	01/07/2014	REACH (Authorization)
			C	All applications other than rank B.	—	—	
	12	Beryllium and beryllium compounds					IEC62474 *12
			C	All applications	—	—	
	13	Bismuth and bismuth compounds					IEC62474 *12
			C	All applications	—	—	
	14	Nickel and nickel compounds *5					IEC62474 *12
			B	if the rate of nickel release from the parts of these products coming into direct and prolonged contact with the skin is greater than 0.5 µg/cm2/week;	—	Immediate	IEC62474 *12
			C	All applications other than rank B.	—	—	
	15	Selenium and selenium compounds					
			C	All applications	—	—	
	16	Thallium and thallium compounds					
			C	All applications	—	—	
	17	Pentazinc chromate octahydroxide					IEC62474 *12
			C	All applications	—	—	REACH(SVHC)
	18	Potassium hydroxyoctaoxodizincate dichromate					IEC62474 *12
			C	All applications	—	—	REACH(SVHC)

Classification	No.	Substance group	Rank	Applications	Threshold value *1	Date of restriction	Remarks
Halogenated	19	Polybrominated biphenyls (PBBs)					IEC62474 *12
			B	All applications	1000ppm	Immediate	
			(Analysis method) (1) Simplified Simple analysis (screening measurement) [Method] X-ray fluorescent spectroscopy [Equipment] Energy Dispersive X-ray Fluorescence Spectrometer [Summary] Implement simple pretreatment on samples, such as cutting, pulverizing, etc., collect samples of a predetermined volume and weight and guide them into the analysis equipment; this enables analysis as to whether or not bromine is contained as well as the order analysis in a simplified manner. This is suited for analysis of resin, rubber, metal, glass, ceramic members. Using semi-quantitative analysis software (fundamental parameter method)and quantitative analysis software (calibration curve method) incorporated in the equipment, measure the content of total bromine. This method is not intended for measuring the amount of PBB or PBDE but for measuring the amount of total bromine. (2) Detailed analysis (quantitative analysis) [Method] Gas chromatography [Equipment] High-resolution gas chromatograph/high-resolution mass spectrometer (HRGC) [Summary] For the pretreatment method, freeze samples, freeze and pulverize in the light-shielded conditions, dissolve and extract by the inorganic solvent. Add 13C12 labeled internal standard to the sample solution, and analyze by a high-resolution double-focusing mass spectrometer.			
	20	Polybrominated diphenyl ethers (PBDEs)					IEC62474 *12
			B	All applications <Chemical Substances> Hexabromodiphenyl ether Pentabromodiphenyl ether Tetrabromodiphenyl ether Heptabromodiphenyl ether	—	Immediate	*9
			B	All applications <Chemical Substances> Decabromodiphenyl ether	—	Immediate	*9 US-TSCA REACH(SVHC)
			B	All applications <Chemical Substances> Other polybrominated diphenyl ethers	1000ppm	Immediate	
			(Analysis method) (1) Simple analysis (screening measurement) [Method] X-ray fluorescent spectroscopy [Equipment] Energy Dispersive X-ray Fluorescence Spectrometer [Summary] After cutting and pulverizing samples, collect samples of a predetermined volume and weight and guide them into the analysis equipment; this enables analysis as to whether or not bromine is contained as well as the order analysis in a simplified manner. This is suited for analysis of resin, rubber, metal, glass, ceramic members. Using semi-quantitative analysis software (fundamental parameter method) and quantitative analysis software (calibration curve method) incorporated in the equipment, measure the content of total bromine. This method is not intended for measuring the amount of PBB or PBDE but for measuring the amount of total bromine. (2) Detailed analysis (quantitative analysis) [Method] Gas chromatography [Equipment] High-resolution gas chromatograph/high-resolution mass spectrometer (HRGC) [Summary] For the pretreatment method, freeze samples, freeze and pulverize in the light-shielded conditions, dissolve and extract by the inorganicsolvent. Add 13C12 labeled internal standard to the sample solution, and analyze by a high-resolution double-focusing mass spectrometer.			
	21	Polychlorinated biphenyls (PCBs)					IEC62474 *12
			B	All applications	—	Immediate	*9
	22	Polychlorinated naphthalenes (one or more chlorine atoms)					IEC62474 *12
			B	All applications	—	Immediate	*9
	23	Short chain chlorinated paraffins *5					IEC62474 *12
			B	All applications	—	Immediate	*9
	24	Brominated flame retardants *6					IEC62474 *12
			C	All applications	—	—	
	25	Chlorinated Flame Retardants (CFR)					IEC62474 *12
			C	All applications	—	—	
	26	Vinyl chloride polymer (PVC)					
			C	All applications	—	—	
Others	27	Asbestos					IEC62474 *12
			B	All applications	1000ppm	Immediate	Industrial Safety and Health Law*8
			(Analysis method) (1) Analysis of asbestos content in natural mineral products [Method] Analysis method of asbestos content in natural mineral products (Circular No. 0828001 (August 28, 2006) by the Director of the Chemical Hazards Control Division, Industrial Safety and Health Department, Labour Standards Bureau, Ministry of Health, Labour and Welfare) (2) Analysis of asbestos content in others [Method] Analysis method of asbestos content in building material(Circular No. 0821002 (August 21, 2006) by the Director-General of the Labour Standards Bureau, Ministry of Health, Labour and Welfare)			
	28	White phosphorus					Industrial Safety and Health Law*8
			B	White phosphorus matches	—	Immediate	
	29	Red phosphorus					
			B	Flame retardant in resin(excluding flame retardant possessing water resistance)	—	Immediate	
			C	All applications other than rank B.	—	—	
	30	Benzidine and its salt					Industrial Safety and Health Law*8
			B	All applications	10000ppm	Immediate	
	31	4-aminobiphenyl and its salt					Industrial Safety and Health Law*8
			B	All applications	10000ppm	Immediate	
	32	4-nitrobiphenyl and its salt					Industrial Safety and Health Law*8
			B	All applications	10000ppm	Immediate	
	33	Bis(chlorometyl) ether					Industrial Safety and Health Law*8
			B	All applications	10000ppm	Immediate	

Classification	No.	Substance group	Rank	Applications	Threshold value *1	Date of restriction	Remarks
Others	34	Beta-naphthylamine and its salt					
			B	All applications	10000ppm	Immediate	Industrial Safety and Health Law*8
	35	Benzene					
			B	Rubber cement contains benzene (The amount of benzene is more than 5% weight of solvent in the rubber cement) (including diluted solution)	—	Immediate	Industrial Safety and Health Law*8
	36	Azo dyes that generate certain specific amines *8					IEC62474 *12 REACH (Authorization)
			B	Applications that involve the possibility of the substance directly contacting human skin or buccal cavity for long time	—	Immediate	
	37	Radioactive substances					IEC62474 *12
			B	Except for instrument-related applications	—	Immediate	
			C	Instrument-related applications	—	—	
	38	Phthalates *9					IEC62474 *12 REACH (Restriction) RoHS Directive
			B	All applications containing the following four substances: Purchased items separately designated by our Company may be treated as Rank C. Additionally, threshold values for each regulation are as shown below; ※RoHS Directive: Content concentration for 1 regulated substance must be less than 1000 ppm ※REACH Regulation: Total content concentration for 4 regulated substances must be less than 1000 ppm <Target substance> -Dibutyl phthalate：DBP(CAS No84-74-2) -Di (2-ethylhexyl) phthalate：DEHP(CAS No117-81-7) -Butyl benzyl phthalate：BBP(CAS No85-68-7) -Diisobutyl phthalate：DIBP(CAS No84-69-5)		Immediate	
			C	All applications containing phthalic acid esters other than chemical substances designated as Rank B	—	—	
	39	Trichloroethylene					REACH (Authorization)
			B	All applications	—	Immediate	
	40	Tetrachloroethylene					
			B	All applications	—	Immediate	
	41	Dichloromethane					
			B	All applications other than rank C	—	Immediate	
			C	-Residue in polycarbonate resin -Residue of dichloromethane used as a solvent in manufacturing process of LCD polarizer and removed.	—	—	
	42	Dioxins					
			B	All applications	—	Immediate	
	43	Perfluorooctane sulfonate (PFOS) and its salts					IEC62474 *12 *9 Stockholm Convention on Persistent Organic Pollutants
			B	Intentional use	—	Immediate	
				Within articls or parts	100ppm		
				Surface Preparation	1μ g/m2		
	44	Perfluorooctane sulfonyl fluoride(PFOSF)					*9
			B	All applications	—	Immediate	
	45	Hexachlorobenzene					*9
			B	All applications other than rank C	—	Immediate	
			C	In the case that small amounts are included as a by-product, and there is no risk of causing damage to the growth or habitat of animals and plants or risk to human health through pollution of the environment due to such by-products, and the level of content ratio is deemed to be feasibly reduced by all industrial and economical means.	—	—	
	46	1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-exo-1,4-endo-5,8-dimethano-naphthalene (also known as Aldrin)					*9
			B	All applications	—	Immediate	
	47	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-exo-1,4-endo-5,8-dimethano naphthalene (also known as Dieldrin)					*9
			B	All applications	—	Immediate	
	48	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo-1,4-endo-5,8-dimethano naphthalene (also known as Endrin)					*9
			B	All applications	—	Immediate	
	49	1,1,1-Trichloro-2,2-bis(4-chlorophenyl) ethane (also known as DDT)					*9
			B	All applications	—	Immediate	
	50	Mixture of 1,2,4,5,6,7,8,8-Octachloro-2,3,3a,4,7,7a-hexahydro-4,7-methano-1H-indene,1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-4,7-methano-1H-indeneand their analogouscompounds (also known as Chlordane or Heptachlor)					*9
			B	All applications	—	Immediate	
	51	N,N'-Ditolyl-p-phenylenediamine,N-tolyl-N'-xylyl-p-phenylenediamine, or N,N'-dixylyl-p-phenylenediamine					*9
			B	All applications	—	Immediate	
	52	2,4,6-Tri-tert-butylphenol					*9
			B	All applications	—	Immediate	
	53	Polychloro-2,2-dimethyl-3-methylidenebicyclo[2.2.1]heptane (also known as Toxaphene)					*9
			B	All applications	—	Immediate	
	54	Dodecachloropentacyclo [5.3.0.0(2,6).0(3,9).0(4,8)] decane (also known as Mirex)					*9
			B	All applications	—	Immediate	
	55	2,2,2- Trichloro-1,1- bis(4-chlorophenyl) ethanol(also known as Kelthane or Dicofol)					*9
			B	All applications	—	Immediate	
	56	Hexachlorobuta-1,3-diene					US-TSCA *9
			B	All applications	—	Immediate	

Classification	No.	Substance group	Rank	Applications	Threshold value *1	Date of restriction	Remarks
Others	57	Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)-, 2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)					*9
			B	All applications	–	Immediate	REACH (Authorization)
	58	Pentachlorobenzene					*9
			B	All applications	–	Immediate	
	59	r-1,c-2,t-3,c-4,t-5,t-6-hexachlorocyclo hexane(Alphahexachlorocyclohexane)					*9
			B	All applications	–	Immediate	
	60	r-1,t-2,c-3,t-4,c-5,t-6-hexachlorocyc lohexane (Betahexachlorocyclohexane)					*9
			B	All applications	–	Immediate	
	61	r-1,c-2,t-3,c-4,c-5,t-6-hexachlorocyclohexane(Gamma hexachlorocyclohexane or lindane）					*9
			B	All applications	–	Immediate	
	62	Decachloropentacyclo [5.3.0.0(2,6).0(3,9).0(4,8)] decane-5-one(Chlordecone)					*9
			B	All applications	–	Immediate	
	63	5-tert-butyl-2,4,6-trinitro-m-xylene［musk xylene］					REACH (Authorization)
			B	All applications	–	Immediate	
	64	Tris(2-chloroethyl) phosphate					REACH (Authorization)
			B	All applications	–	Immediate	
	65	PFC, SF6,HFC					
			C	All applications	–	–	
	66	Formaldehyhde					
			C	Composite wood products or components	–	–	
	67	Perchlorate compounds					IEC62474 *12
			C	All applications	–	–	
	68	2,4-Dinitrotoluene					REACH (Authorization)
			C	All applications	–	–	
	69	Anthracene oil					REACH (Authorization)
			C	All applications	–	–	
	70	Anthracene oil, anthracene paste, distn. Lights					
			C	All applications	–	–	
	71	Anthracene oil, anthracene paste, anthracene fraction					
			C	All applications	–	–	
	72	Anthracene oil, anthracene-low					
			C	All applications	–	–	
	73	Anthracene oil, anthracene paste					
			C	All applications	–	–	
	74	Aluminosilicate, Refractory Ceramic Fibres					IEC62474 *12
			C	All applications	–	–	REACH(SVHC)
	75	Zirconia Aluminosilicate, Refractory Ceramic Fibres					IEC62474 *12
			C	All applications	–	–	REACH(SVHC)
	76	Coal tar pitch, high temperature					REACH (Authorization)
			C	All applications	–	–	
	77	Acrylamide					
			C	All applications	–	–	
	78	Dimethyl fumarate(DMF)					IEC62474 *13
			B	All applications	–	Immediate	
	79	Hexabromocyclododecane (HBCDD)					IEC62474 *13
			B	All applications	–	Immediate	REACH (Authorization) *9
	80	Polycyclic aromatic hydrocarbons (PAHs)*13					REACH (Restriction)
			B	When any of the above PAH are included at more than 1ppm in rubber or plastic components which come in contact with human skin or the oral cavity directly, either for a long time or short period of time. <Chemical Substances> ・Benzo[a]pyrene (BaP) ・Benzo[e]pyrene (BeP) ・Benzo[a]anthracene (BaA) ・Chrycene (CHR) ・Benzo[b]fluoranthene (BbFA) ・Benzo[j]fluoranthene (BjFA) ・Benzo[k]fluoranthene (BkFA) ・Dibenzo[a,h]anthracene (DBAhA)	1ppm	Immediate	
			C	All applications other than rank B／PAHs other than rank B	–	–	
	81	Boric acid					IEC62474 *12
			C	All applications	–	–	REACH(SVHC)
	82	Disodium tetraborate, anhydrous					IEC62474 *12
			C	All applications	–	–	REACH(SVHC)
	83	Tetraboron disodium heptaoxide, hydrate					REACH(SVHC)
			C	All applications	–	–	
	84	Cobalt(Ⅱ) sulphate					REACH(SVHC)
			C	All applications	–	–	
	85	Cobalt(Ⅱ) dinitrate					REACH(SVHC)
			C	All applications	–	–	
	86	Cobalt(Ⅱ) carbonate					REACH(SVHC)
			C	All applications	–	–	
	87	Cobalt(Ⅱ) diacetate					REACH(SVHC)
			C	All applications	–	–	
	88	2-Methoxyethanol					REACH(SVHC)
			C	All applications	–	–	
	89	2-Ethoxyethanol					REACH(SVHC)
			C	All applications	–	–	
	90	2-ethoxyethyl acetate					REACH(SVHC)
			C	All applications	–	–	
	91	1,2-Benzenedicarboxylic acid,di-C7-11-branched and linear alkyl esters					IEC62474 *12
			C	All applications	–	–	REACH (Authorization)

Classification	No.	Substance group	Rank	Applications	Threshold value *1	Date of restriction	Remarks
Others	92	Hydrazine					REACH(SVHC)
			C	All applications	—	—	
	93	1-methyl-2-pyrrolidone					REACH(SVHC)
			C	All applications	—	—	
	94	1,2,3-trichloropropane					REACH(SVHC)
			C	All applications	—	—	
	95	1,2-benzenedi carboxylic acid, di-C6-8-branched alkyl esters, C7-rich［DIHP］					IEC62474 *12 REACH (Restriction)
			C	All applications	—	—	
	96	Formaldehyde, oligomeric reaction products with aniline					IEC62474 *12 REACH (Authorization)
			C	All applications	—	—	
	97	Bis(2-methoxyethyl) phthalate					IEC62474 *12 REACH (Authorization)
			C	All applications	—	—	
	98	2-Methoxyaniline; o-Anisidine					
			C	All applications	—	—	REACH(SVHC)
	99	4-(1,1,3,3-tetramethylbutyl) phenol、4-tert-Octylphenol					IEC62474 *12
			C	All applications	—	—	REACH(SVHC)
	100	1,2-Dichloroethane					REACH (Authorization)
			C	All applications	—	—	
	101	Bis(2-methoxyethyl) ether					IEC62474 *12 REACH (Authorization)
			C	All applications	—	—	
	102	Arsenic acid					REACH (Authorization)
			C	All applications	—	—	
	103	Calcium arsenate					
			C	All applications	—	—	REACH(SVHC)
	104	N,N-dimethylacetamide［DMAC］					
			C	All applications	—	—	REACH(SVHC)
	105	2,2'-dichloro-4,4'-methylenedianiline［MOCA］					REACH (Authorization)
			C	All applications	—	—	
	106	Phenolphthalein					
			C	All applications	—	—	REACH(SVHC)
	107	Other chlorine compounds *13					
			C	All applications	—	—	
	108	1,2-bis(2-methoxyethoxy)ethane［TEGDME, triglyme］					IEC62474 *12
			C	All applications	—	—	REACH(SVHC)
	109	1,2-dimethoxyethane; ethylene glycol dimethyl ether［EGDME］					IEC62474 *12
			C	All applications	—	—	REACH(SVHC)
	110	Diboron trioxide					IEC62474 *12
			C	All applications	—	—	REACH(SVHC)
	111	Formamide					
			C	All applications	—	—	REACH(SVHC)
	112	TGIC (1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione)					
			C	All applications	—	—	REACH(SVHC)
	113	β-TGIC (1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione)					
			C	All applications	—	—	REACH(SVHC)
	114	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)					
			C	All applications	—	—	REACH(SVHC)
	115	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)					
			C	All applications	—	—	REACH(SVHC)
	116	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26)					
			C	All applications	—	—	REACH(SVHC)
	117	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3)					IEC62474 *12
			C	All applications	—	—	REACH(SVHC)
	118	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol					REACH (Authorization)
			C	All applications	—	—	
	119	α,α-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4)					REACH(SVHC)
			C	All applications	—	—	
	125	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated - covering well-defined substances and UVCB substances, polymers and homologues					REACH (Authorization)
			C	All applications	—	—	
	126	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]					REACH(SVHC)
			C	All applications	—	—	
	127	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))					REACH(SVHC)
			C	All applications	—	—	
	128	Cyclohexane-1,2-dicarboxylic anhydride (Hexahydrophthalic anhydride - HHPA)					REACH(SVHC)
			C	All applications	—	—	
	129	Hexahydromethylphathalic anhydride,Hexahydro-4-methylphathalic anhydride,Hexahydro-1-methylphathalic anhydride,Hexahydro-3-methylphathalic anhydride					REACH(SVHC)
			C	All applications	—	—	

Classification	No.	Substance group	Rank	Applications	Threshold value *1	Date of restriction	Remarks
Others	130	Methoxy acetic acid					REACH(SVHC)
			C	All applications	–	–	
	131	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear					IEC62474 *12
			C	All applications	–	–	REACH (Authorization)
	132	Diisopentylphthalate (DIPP)					IEC62474 *12
			C	All applications	–	–	REACH (Authorization)
	133	N-pentyl-isopentylphtalate					IEC62474 *12
			C	All applications	–	–	REACH (Authorization)
	134	1,2-Diethoxyethane					IEC62474 *12
			C	All applications	–	–	REACH(SVHC)
	135	N,N-dimethylformamide; dimethyl formamide					IEC62474 *12
			C	All applications	–	–	REACH(SVHC)
	136	Pyrochlore, antimony lead yellow					REACH(SVHC)
			C	All applications	–	–	
	137	Silicic acid, barium salt, lead-doped					IEC62474 *12
			C	All applications	–	–	REACH(SVHC)
	138	Furan					REACH(SVHC)
			C	All applications	–	–	
	139	Propylene oxide; 1,2-epoxypropane; methyloxirane					REACH(SVHC)
			C	All applications	–	–	
	140	Diethyl sulphate					REACH(SVHC)
			C	All applications	–	–	
	141	Dimethyl sulphate					REACH(SVHC)
			C	All applications	–	–	
	142	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine					REACH(SVHC)
			C	All applications	–	–	
	143	Dinoseb					REACH(SVHC)
			C	All applications	–	–	
	144	4,4'-methylenedi-o-toluidine					REACH(SVHC)
			C	All applications	–	–	
	145	4,4'-oxydianiline and its salts					REACH(SVHC)
			C	All applications	–	–	
	146	4-Aminoazobenzene; 4-Phenylazoaniline					IEC62474 *12
			C	All applications	–	–	REACH(SVHC)
	147	4-methyl-m-phenylenediamine (2,4-toluene-diamine)					
			C	All applications	–	–	REACH(SVHC)
	148	6-methoxy-m-toluidine (p-cresidine)					REACH(SVHC)
			C	All applications	–	–	
	149	Biphenyl-4-ylamine					REACH(SVHC)
			C	All applications	–	–	
	150	o-aminoazotoluene					REACH(SVHC)
			C	All applications	–	–	
	151	o-Toluidine; 2-Aminotoluene					REACH(SVHC)
			C	All applications	–	–	
	152	N-methylacetamide					REACH(SVHC)
			C	All applications	–	–	
	153	1-bromopropane; n-propyl bromide					REACH
			C	All applications	–	–	(Authorization)
	154	Dipentyl phthalate (DPP)					REACH
			C	All applications	–	–	(Authorization)
	155	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]					REACH (Authorization)
			C	All applications	–	–	
	156	APFO(Ammonium pentadecafluorooctanoate)					REACH(SVHC)
			C	All applications	–	–	
	157	PFOA(Pentadecafluorooctanoic acid)					*9
			B	Intentional use	–	–	POPs Regulation
				PFOA and its salts	25ppb (0,025ppm)	–	
				Total concentration of PFOA related substances	1000ppb (1ppm)	–	
	158	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)					REACH(SVHC)
			C	All applications	–	–	
	159	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)					REACH(SVHC)
			C	All applications	–	–	
	160	Dihexyl phthalate					REACH(SVHC)
			C	All applications	–	–	(Authorization)
	161	Imidazolidine-2-thione; (2-imidazoline-2-thiol)					REACH(SVHC)
			C	All applications	–	–	
	162	Trixylyl phosphate					REACH(SVHC)
			C	All applications	–	–	(Authorization)
	163	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear					REACH(SVHC)
			C	All applications	–	–	(Authorization)
	164	Sodium perborate; perboric acid, sodium salt					REACH(SVHC)
			C	All applications	–	–	(Authorization)
	165	Sodium peroxometaborate					REACH(SVHC)
			C	All applications	–	–	(Authorization)

Classification	No.	Substance group	Rank	Applications	Threshold value *1	Date of restriction	Remarks
Others	167	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)					Stockholm Convention REACH(SVHC) (Authorization)
			B	All applications	–	Immediate	
	168	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)					REACH (Authorization)
			C	All applications	–	–	
	169	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)					REACH (Authorization)
			C	All applications	–	–	
	170	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters with>0.3% of dihexyl phthalate (EC No.201-559-5)					REACH (Authorization)
			C	All applications	–	–	
	171	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]					REACH (Authorization)
			C	All applications	–	–	
	172	1,3-propanesultone					REACH(SVHC)
			C	All applications	–	–	
	173	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol(UV-327)					REACH (Authorization)
			C	All applications	–	–	
	174	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol(UV-350)					REACH (Authorization)
			C	All applications	–	–	
	175	Nitrobenzene					REACH(SVHC)
			C	All applications	–	–	
	177	Benzo[def]chrysene (Benzo[a]pyrene)					REACH(SVHC)
			C	All applications	–	–	
	178	4,4'-isopropylidenediphenol (bisphenol A; BPA)					REACH(SVHC)
			C	All applications	–	–	
	180	p-(1,1-dimethylpropyl)phenol					REACH(SVHC)
			C	All applications	–	–	
	181	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]					REACH(SVHC)
			C	All applications	–	–	
	183	Perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS-related compounds					*9 REACH(SVHC)
			B	All applications	–	Immediate	
	184	Chrysene					REACH(SVHC)
			C	All applications	–	–	
	185	Benz[a]anthracene					REACH(SVHC)
			C	All applications	–	–	
	186	Cadmium nitrate					REACH(SVHC)
			C	All applications	–	–	
	187	Cadmium hydroxide					REACH(SVHC)
			C	All applications	–	–	
	188	Cadmium carbonate					REACH(SVHC)
			C	All applications	–	–	
	189	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 thereof]					Stockholm Convention CEPA *14 REACH(SVHC)
			B	All applications	–	Immediate	
	190	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					REACH (Authorization)
			C	All applications	–	–	
	191	Octamethylcyclotetrasiloxane (D4)					REACH(SVHC)
			C	All applications	–	–	
	192	Decamethylcyclopentasiloxane (D5)					REACH(SVHC)
			C	All applications	–	–	
	193	Dodecamethylcyclohexasiloxane (D6)					REACH(SVHC)
			C	All applications	–	–	
	194	Disodium octaborate					REACH(SVHC)
			C	All applications	–	–	
	195	Benzo[ghi]perylene					REACH(SVHC)
			C	All applications	–	–	
	196	Terphenyl hydrogenated					REACH(SVHC)
			C	All applications	–	–	
	197	Ethylenediamine					REACH(SVHC)
			C	All applications	–	–	
	198	2,2-bis(4'-hydroxyphenyl)-4-methylpentane					REACH(SVHC)
			C	All applications	–	–	
	199	Benzo[k]fluoranthene					REACH(SVHC)
			C	All applications	–	–	
	200	Fluoranthene					REACH(SVHC)
			C	All applications	–	–	
	201	Phenanthrene					REACH(SVHC)
			C	All applications	–	–	
	202	Pyrene					REACH(SVHC)
			C	All applications	–	–	
	203	2-methoxyethyl acetate					REACH(SVHC)
			C	All applications	–	–	
	204	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP)					REACH(SVHC)
			C	All applications	–	–	

Classification	No.	Substance group	Rank	Applications	Threshold value *1	Date of restriction	Remarks
Others	205	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)					REACH(SVHC)
			C	All applications	—	—	
	206	4-tert-butylphenol					REACH(SVHC)
			C	All applications	—	—	
	207	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone					REACH(SVHC)
			C	All applications	—	—	
	208	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one					REACH(SVHC)
			C	All applications	—	—	
	209	Diisohexyl phthalate					REACH(SVHC)
			C	All applications	—	—	
	210	Perfluorobutane sulfonic acid (PFBS) and its salts					REACH(SVHC)
			C	All applications	—	—	
	211	6,7,8,9,10,10-Hexachloro-1,5,5a,6,9,9a-hexahydro-6,9-methano-2,4,3-benzodioxathiepine 3-oxide					*9
			B	All applications	—	—	
	212	Sodium Pentachlorophenate					*9
			B	All applications	—	—	
	213	Phenol, Isopropylated Phosphate (3:1) (PIP (3:1))					US-TSCA
			B	All applications	—	Immediate	
	214	2,4,6-tris(tert-butyl)phenol (2,4,6-TTBP)					US-TSCA
			B	All applications	—	—	
	215	Pentachlorothiophenol (PCTP)					US-TSCA
			B	All applications	—	—	
	216	per-and polyfluoroalkyl substances(PFAS)					US-TSCA
			C	All applications	—	—	
	217	1-vinylimidazole					REACH(SVHC)
			C	All applications	—	—	
	218	2-methylimidazole					REACH(SVHC)
			C	All applications	—	—	
	219	Butyl 4-hydroxybenzoate					REACH(SVHC)
			C	All applications	—	—	
	220	Dibutylbis(pentane-2,4-dionato-O,O')tin					REACH(SVHC)
			C	All applications	—	—	
	221	bis(2-(2-methoxyethoxy)ethyl) ether					REACH(SVHC)
			C	All applications	—	—	
	222	Dioctyltin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy)derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety					REACH(SVHC)
			C	All applications	—	—	
	223	1,4-dioxane					REACH(SVHC)
			C	All applications	—	—	
	224	2,2-bis(bromomethyl)propane1,3-diol(BMP);2,2dimethylpropan 1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA);2,3-dibromo-1-propanol (2,3-DBPA)					REACH(SVHC)
			C	All applications	—	—	
	225	2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers					REACH(SVHC)
			C	All applications	—	—	
	226	4,4'-(1-methylpropylidene)bisphenol; (bisphenol B)					REACH(SVHC)
			C	All applications	—	—	
	227	Glutaral					REACH(SVHC)
			C	All applications	—	—	
	228	Medium-chain chlorinated paraffins (MCCP) [UVCB substances consisting of more than or equal to 80% line archloroalkanes with carbon chain lengths within the range from C14 to C17]					REACH(SVHC)
			C	All applications	—	—	
	229	Orthoboric acid, sodium salt					REACH(SVHC)
			C	All applications	—	—	
	230	Phenol, alkylation products (mainly in para position) with C12-rich branched or linear alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP)					REACH(SVHC)
			C	All applications	—	—	
	231	Decabromo-diphenyl-ethane(DBDPE)					*14 CEPA
			C	All applications	—	—	
	232	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol (DBMC)					REACH(SVHC)
			C	All applications	—	—	
	233	tris(2-methoxyethoxy)vinylsilane					REACH(SVHC)
			C	All applications	—	—	
	234	(±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC)					REACH(SVHC)
			C	All applications	—	—	
	235	S-(tricyclo[5.2.1.0'2,6]deca-3-en-8(or 9)-yl) O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate					REACH(SVHC)
			C	All applications	—	—	
	236	N-(hydroxymethyl)acrylamide					REACH(SVHC)
			C	All applications	—	—	
	237	1,1'-[ethane-1,2-diylbisoxy]bis[2,4,6-tribromobenzene]					REACH(SVHC)
			C	All applications	—	—	
	238	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol					REACH(SVHC)
			C	All applications	—	—	
	239	4,4'-sulphonyldiphenol					REACH(SVHC)
			C	All applications	—	—	
	240	Barium diboron tetraoxide					REACH(SVHC)
			C	All applications	—	—	
	241	Bis(2-ethylhexyl) tetrabromophthalate covering any of the individual isomers and/or combinations thereof					REACH(SVHC)
			C	All applications	—	—	

Classification	No.	Substance group	Rank	Applications	Threshold value *1	Date of restriction	Remarks
Others	242	Isobutyl 4-hydroxybenzoate					REACH(SVHC)
			C	All applications	—	—	
	243	Melamine					REACH(SVHC)
			C	All applications	—	—	
	244	Perfluoroheptanoic acid and its salts					REACH(SVHC)
			C	All applications	—	—	
	245	reaction mass of 2,2,3,3,5,5,6,6-octafluoro-4-(1,1,1,2,3,3,3-heptafluoropropan-2-yl)morpholine and 2,2,3,3,5,5,6,6-octafluoro-4-(heptafluoropropyl)morpholine					REACH(SVHC)
			C	All applications	—	—	
	246	C9-C14 linear and/or branched perfluorocarboxylic acids (C9-C14 PFCAs), their salts and C9-C14 PFCAs-related substances					IEC62474 *12
			B	All applications <Chemical Substances> C9-C14 PFCAs and their salts	25ppb (0.025ppm)	Immediate	REACH (Restriction)
				All applications <Chemical Substances> C9-C14 PFCAs-related substances	260ppb (0.26ppm) *the sum of substances	Immediate	
	247	bis(4-chlorophenyl) sulphone					REACH(SVHC)
			C	All applications	—	—	
	248	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide					REACH(SVHC)
			C	All applications	—	—	
	249	2,4,6-tri-tert-butylphenol					REACH(SVHC)
			C	All applications	—	—	
	250	2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329)					REACH(SVHC)
			C	All applications	—	—	
	251	2-(dimethylamino)-2-[(4-methylphenyl)methyl]-1-[4-(morpholin-4-yl)phenyl]butan-1-one					REACH(SVHC)
			C	All applications	—	—	
	252	Bumetrizole (UV-326)					REACH(SVHC)
			C	All applications	—	—	
	253	Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol					REACH(SVHC)
			C	All applications	—	—	
	254	Methoxychlor					Stockholm Convention
			B	All applications	—	Immediate	
	255	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one (3-benzylidene camphor; 3-BC)					REACH(SVHC)
			C	All applications	—	—	
	256	Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride; TMA)					REACH(SVHC)
			C	All applications	—	—	
	257	4-(1,1,3,3-tetramethylbutyl)phenol					REACH(SVHC)
			C	All applications	—	—	

Note1: The present guidelines include the latest information of European RoHS directives as of January 2019.

Note2: The present guidelines apply to packing materials used for products released to our customers but do not apply to packaging and packing materialused for products delivered to our company (see page 3 of the guideline for packaging and packing material of delivered products.)

Note3: This does not apply to non-radioactive reagents for measurement, analysis or research.

Note4: This does not apply to substances enclosed hermetically in a piece of equipment, a device or a fixture at any stage during purchase, use and disposal.

Note5: Typical materials that belong to each material classification are listed on attached table 5 in this table

Note6: So we will be an increase in substances of very high concern (SVHC), in the European REACH Regulation, it may at the time have been formally identified,contact you via surveys to conduct research about substance not listed in this guideline in the future. In addition, more information, please check the website at the European Chemicals Agency. (http://echa.europa.eu/)

*1: Intentional use of prohibited materials (rank B) is not acceptable.
However, lead intentionally used for electroless plating is acceptable if it is controlled to the threshold value of 1000 ppm.
Impurities more than the threshold value is prohibited per each part of components.
(Please refer the chart on page 5.)

*2: For packaging and packing material subject to Note 2, the total content of four heavy metals (cadmium, lead, mercury, and hexavalent chromium compounds) shall not exceed 100 ppm.

*3: Threshold of heavy metals in battery are listed the below;
Cadmium: 0.0005wt% (per total weight of battery)
Lead: 0.002wt% (per total weight of battery)
Mercury: 0.004wt% (per total weight of battery)

*4: Nickel compounds except for metal alloys (for example: stainless steel).

*5: Prohibition applies to short chain chlorinated paraffins with carbon numbers from 10 to 13.

*6: Brominated flame retardant except for PBBs and PBDEs. Indicate with ISO code 1043-4 or CAS No.

*7: Specific amines are listed in Table 3.

*8: “Toxic substances, production of which is prohibited “under Article 16 of the Industrial Safety and Health Law.

*9: “Class I specified chemical substance” prescribed in Article 1, Enforcement Ordinance of Law Concerning Examination and Regulation of Manufacture and Handling of Chemical Substances

*10: Each substance is regulated by the European Union REACH Regulation described in table 2 “remarks” as below.
Authorized substances are described as “REACH (Authorized)”, restricted substances are described as “REACH (Restricted)”, and candidates for authorization or substances of very high concern are described as “REACH (SVHC)”.

*11: “Other chlorine compounds” indicate chlorine compounds except “No.1-6,8,9 listed in Table 1” and “No.9,19-21,23,29, 35-38, 41-46,49-52,54-

*12: Material that has been described as "IEC62474" in the chemical group remarks column of Table 2 is a substance that is specified in the IEC62474 (International Electrotechnical Commission).

*13: Specified eight substances to B rank in Polycyclic aromatic hydrocarbons may be contained carbon black using as coloring agent for resin product.

*14: CEPA:Canadian Environmental Protection Act

[Table 3] List of Specific Amines

The term "specific amines" refers to amine compounds to which the Council Directive amending 76/769/EEC for the 19th time applies.

Substance	Chemical formula	CAS No
4-aminoazobenzene	C12H11N3	60-09-3
0-anisidine	C7H9NO	90-04-0
2-naphtylamine	C10H9N	91-59-8
3,3'-dichlorobenzidine	C12H10C12N2	91-94-1
4-aminobiphenyl	C12H11N	92-67-1
Benzidine	C12H12N2	92-87-5
o-toluidine	C7H9N	95-53-4
4-chloro-2-metyl aniline	C7H8ClN	95-69-2
2,4-toluendiamine	C7H10N2	95-80-7
o-aminoazotoluene	C14H15N3	97-56-3
5-nitro-o-toluidine	C7H8N2O2	99-55-8
3,3'-dichloro-4,4'-diamino diphenylmethane	C13H12Cl2N2	101-14-4
4,4'-methylenedianiline	C13H14N2	101-77-9
4,4'-diaminodiphenylether	C12H12N2O	101-80-4
p-chloroaniline	C6H6ClN	106-47-8
3,3'-dimethoxybenzidine	C14H16N2O2	119-90-4
3,3'-dimethylbenzidine	C14H16N2	119-93-7
2-methoxy-5-methyl aniline	C8H11NO	120-71-8
2,4,5-trimethylaniline	C9H13N	137-17-7
4,4'-thiodianiline	C12H12N2S	139-65-1
2,4-diaminoanisole	C7H10N2O	615-05-4
4,4'-diamino-3,3'-dimethyl-diphenylmethane	C15H18N2	838-88-0

[Table 4] List of Ozone Depleting Substances

Class	Substance Classification No.	Substance	Breakdown	Chemical Formula
Class I	C04097	CFCs (Annex A Group I substances in the Montreal Protocol)	CFC-11	CFCl3
			CFC-12	CF2Cl2
			CFC-113	C2F3Cl3
			CFC-114	C2F4Cl2
			CFC-115	C2F5Cl
	C04098	Halons (Annex A Group II substances in the Montreal Protocol)	Halon 1211	CF2BrCl
			Halon 1301	CF3Br
			Halon 2402	C2F4Br2
	C04099	Other CFCs (Annex B Group I substances in the Montreal Protocol)	CFC-13	CF3Cl
			CFC-111	C2FCl5
			CFC-112	C2F2Cl4
			CFC-211	C3FCl7
			CFC-212	C3F2Cl6
			CFC-213	C3F3Cl5
			CFC-214	C3F4Cl4
			CFC-215	C3F5Cl3
			CFC-216	C3F6Cl2
			CFC-217	C3F7Cl
	C04100	Carbon tetrachloride (Annex B Group II substance in the Montreal Protocol)	Carbon tetrachloride	CCl4
	C04101	1.1.1-trichloroethane (Annex B Group III substance in the Montreal Protocol)	1,1,1-trichloroethane	C2H3Cl3
	C04102	Bromochloromethane (Annex C Group III substance in the Montreal Protocol)	Bromochloromethane	CH2BrCl
	C04103	Methyl bromide (Annex E substance in the Montreal Protocol)	Methyl bromide	CH3Br
	C04104	HBFCs (Annex C Group II substances in the Montreal Protocol)	Dibromofluoromethane	CHFBr2
			Bromodifluoromethane	CHF2Br
			Bromofluoromethane	CH2FBr
			Tetrabromofluoroethane	C2HFBr4
			Tribromodifluoroethane	C2HF2Br3
			Dibromotrifluoroethane	C2HF3Br2
			Bromotetrafluoroethane	C2HF4Br
			Tribromofluoroethane	C2H2FBr3
			Dibromodifluoroethane	C2H2F2Br2
			Bromotrifluoroethane	C2H2F3Br
			Dibromofluoroethane	C2H3FBr2
			Bromodifluoroethane	C2H3F2Br
			Bromofluoroethane	C2H4FBr
			Hexabromofluoropropane	C3HFBr6
			Pentabromodifluoropropane	C3HF2Br5
			Tetrabromotrifluoropropane	C3HF3Br4
			Tribromotetrafluoropropane	C3HF4Br3
			Dibromopentafluoropropane	C3HF5Br2
			Bromohexafluoropropane	C3HF6Br
			Pentabromofluoropropane	C3H2FBr5
			Tetrabromodifluoropropane	C3H2F2Br4
			Tribromotrifluoropropane	C3H2F3Br3
			Dibromotetrafluoropropane	C3H2F4Br2
			Bromopentafluoropropane	C3H2F5Br
			Tetrabromofluoropropane	C3H3FBr4
			Tribromodifluoropropane	C3H3F2Br3
			Dibromotrifluoropropane	C3H3F3Br2
			Bromotetrafluoropropane	C3H3F4Br
			Tribromofluoropropane	C3H4FBr3
			Dibromodifluoropropane	C3H4F2Br2
			Bromotrifluoropropane	C3H4F3Br
			Dibromofluoropropane	C3H5FBr2
			Bromodifluoropropane	C3H5F2Br
			Bromofluoropropane	C3H6FBr
			Bromochloromethane	CH2BrCl
Class II	C04105	HCFCs (Annex C Group I substances in the Montreal Protocol)	HCFC-21	CHFCl2
			HCFC-22	CHF2Cl
			HCFC-31	CH2FCl
			HCFC-121	C2HFCl4
			HCFC-122	C2HF2Cl3
			HCFC-123	C2HF3Cl2
			HCFC-123*1	CHCl2CF3
			HCFC-124	C2HF4Cl
			HCFC-124*1	CHFClCF3
			HCFC-131	C2H2FCl3
			HCFC-132	C2H2F2Cl2

Class	Substance Classification No.	Substance	Breakdown	Chemical Formula
Class II	C04105	HCFCs (Annex C Group I substances in the Montreal Protocol)	HCFC-133	C2H2F3Cl
			HCFC-141	C2H3FCl2
			HCFC-141b*1	CH3CFCl2
			HCFC-142	C2H3F2Cl
			HCFC-142b*1	CH3CF2Cl
			HCFC-151	C2H4FCl
			HCFC-221	C3HFCl6
			HCFC-222	C3HF2Cl5
			HCFC-223	C3HF3Cl4
			HCFC-224	C2HF4Cl3
			HCFC-225	C3HF5Cl2
			HCFC-225ca*1	CF3CF2CHCl2
			HCFC-225cb*1	CF2ClCF2CHClF
			HCFC-226	C3HF6Cl
			HCFC-231	C3H2FCl5
			HCFC-232	C3H2F2Cl4
			HCFC-233	C3H2F3Cl3
			HCFC-234	C3H2F4Cl2
			HCFC-235	C3H2F5Cl
			HCFC-241	C3H3FCl4
			HCFC-242	C3H3F2Cl3
			HCFC-243	C3H3F3Cl2
			HCFC-244	C3H3F4Cl
			HCFC-251	C3H4FCl3
			HCFC-252	C3H4F2Cl2
			HCFC-253	C3H4F3Cl
			HCFC-261	C3H5FCl2
			HCFC-262	C3H5F2Cl
			HCFC-271	C3H6FCl

*1: Substances most likely to be used commercially.

[Table 5-1] Breakdown List of Substances (Metal compounds)

Classification	Substance Group	Substance	Chemical Formula	CAS No.
Metal compounds	Cadmium and cadmium compounds	Cadmium	Cd	7440-43-9
		Cadmium oxide	CdO	1306-19-0
		Cadmium sulfide	CdS	1306-23-6
		Cadmium chloride	CdCl2	10108-64-2
		Cadmium sulfate	CdSO4	10124-36-4
		Other cadmium compounds	—	—
	Hexavalent chromium compounds	Sodium dichromate	Na2Cr2O7	10588-01-9
		Chromium (VI) oxide	CrO3	1333-82-0
		Calcium chromate	CaCrO4	13765-19-0
		Lead (II) chromate	PbCrO4	7758-97-6
		Potassium dichromate	K2Cr2O7	7778-50-9
		Potassium chromate	K2CrO4	7789-00-6
		Barium chromate	BaCrO4	10294-40-3
		Sodium chromate	Na2CrO4	7775-11-3
		Strontium chromate	SrCrO4	7789-06-2
		Other hexavalent chromium compounds	—	—
	Lead and lead compounds	Lead	Pb	7439-92-1
		Lead (II) carbonate	PbCO3	598-63-0
		Lead (IV) oxide	PbO2	1309-60-0
		Lead (II, IV) oxide	Pb3O4	1314-41-6
		Lead (II) sulfide	PbS	1314-87-0
		Lead (II) oxide	PbO	1317-36-8
		Lead (II) carbonate basic	2PbCO3.Pb(OH)2	1319-46-6
		Lead hydroxycarbonate	2PbCO3Pb(OH)2	1344-36-1
		Lead (II) sulfate	PbSO4	7446-14-2
		Lead (II) phosphate	Pb3(PO4)2	7446-27-7
		Lead (II) chromate	PbCrO4	7758-97-6
		Lead (II) titanate	PbTiO3	12060-00-3
		Lead sulfate, sulfuric acid, lead salt	PbXSO4	15739-80-7
		Lead sulfate, tribasic	PbSO4.H2O	12202-17-4
		Lead stearate	Pb(C17H35COO)2	1072-35-1
		Lead stearate, dibasic	2PbO・Pb(C17H35COO)2	56189-09-4
		Lead acetate	C4H6O4Pb / (CH3COO)2Pb	301-04-2
		Lead (II) acetate, trihydrate	Pb(CH3COO)2・3H2O	6080-56-4
		Lead selenide	PbSe	12069-00-0
		Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	—	12656-85-8
		Lead sulfochromate yellow (C.I. Pigment Yellow 34)	—	1344-37-2
		Lead arsenate	Pb3(AsO4)2	3687-31-8
		Lead Hydrogen Arsenate	AsHO4Pb	7784-40-9
		Other lead compounds	—	—
	Mercury and mercury compounds	Mercury	Hg	7439-97-6
		Mercury (II) chloride	HgCl2	7487-94-7
		Mercury (II) oxide	HgO	21908-53-2
		Mercric Chloride	—	33631-63-9
		Mercury sulphate	HgSO4	7783-35-9
		Mercury (II) nitrate; Mercuric nitrate	HgN2O6 / Hg(NO3)2	10045-94-0
		Mercury(II) sulfide; Mercury sulfide (HgS)	HgS	1344-48-5
		Other mercury compounds	—	—
	Bis (tri-n-butyltin) oxide (TBTO)	Bis (tri-n-butyltin) oxide	O(Sn(C4H9)3)2	56-35-9
	Tributyltins (TBTs) and triphenyltins (TPTs)	Triphenyltin N,N''-	(C6H5)3Sn(CH3)2NCS	1803-12-9
		Triphenyltin fluoride	(C6H5)3SnF	379-52-2
		Triphenyltin acetate	(C6H5)3SnOCOCH3	900-95-8
		Triphenyltin chloride	(C6H5)3SnCl	639-58-7
		Triphenyltin hydroxide	(C6H5)3SnOH	76-87-9
		Triphenyltin fatty acid salts (C = 9 to 11)	—	47672-31-1
		Triphenyltin chloroacetate	(C6H5)3SnOCOCH2C	7094-94-2
		Tributyltin methacrylate	(C4H9)3SnC4H5O2	2155-70-6
		Bis (tributyltin) fumarate	C2H2(COO)2((C4H9)3	6454-35-9
		Tributyltin fluoride	(C4H9)3SnF	1983-10-4
		Bis (tributyltin) 2,3-dibromosuccinate	((C4H9)3Sn)2C2H2(Br)	31732-71-5
		Tributyltin acetate	(C4H9)3SnOCOCH3	56-36-0
		Tributyltin laurate	(C4H9)3SnC12H23O2	3090-36-6
		Bis (tributyltin) phthalate	(C6H4)(COO)2((C4H9)	4782-29-0
		Copolymer of alkyl acrylate, methyl methacrylate and tributyltin methacrylate (alkyl; C = 8)	—	—
		Tributyltin sulfamate	(C4H9)3SnSO3NH2	6517-25-5
		Bis (tributyltin) maleate	C2H2(COO)2((C4H9)3	14275-57-1
		Tributyltin chloride	(C4H9)3SnCl	1461-22-9

Classification	Substance Group	Substance	Chemical Formula	CAS No.
Metal compounds	Tributyltins (TBTs) and triphenyltins (TPTs)	Mixture of tributyltin cyclopentane-carboxylate and its analogs (Tributyltin naphthenate)	(C4H9)3SnCO3C5H9	—
		Mixture of tributyltin 1, 2, 3, 4, 4a, 4b, 5, 6, 10, 10a-decahydro-7-isopropyl-1, 4a-dimethyl-1-phenanthlenecarboxylate and its analogs (Tributyltin rosin salt)	—	—
		Other tributyltins and triphenyltins	—	—
	Dibutyltin (DBT) compounds	Dibutyltin oxide	C8H18OSn	818-08-6
		Dibutyltin dichloride	C8H18Cl2Sn	683-18-1
		Dibutyltin dilaurate	C32H64O4Sn	77-58-7
		Dibutyltin bis(benzyl maleate)	C30H36O8Sn	7324-74-5
		Dibutyltin maleate	C12H20O4Sn	1978-4-6
		Dibutuyltin di(acetate)	C12H24O4Sn	1067-33-0
	Dioctyltin (DOT) compounds	Dioctyltin oxide	C16H34OSn	870-08-6
		Dioctyltin dichloride	C16H34Cl2Sn	3542-36-7
		Dioctyltin maleate	C20H36O4Sn	16091-18-2
		Di(n-octyl)tin bis(isooctylthioglycolate)	C36H72O4S2Sn	26401-97-8
		Dioctyltin dilaurates (DOTL)	C40H80O4Sn	3648-18-8
	Antimony and antimony compounds	Antimony	Sb	7440-36-0
		Antimony trichloride	SbCl3	10025-91-9
		Antimony trioxide	Sb2O3	1309-64-4
		Antimony pentoxide	SB2O5	1314-60-9
		Sodium antimonite	Na3O4Sb	15432-85-6
		Other antimony compounds	—	—
	Arsenic and arsenic compounds	Arsenic	As	7440-38-2
		Gallium arsenide	GaAs	1303-00-0
		Arsenic pentoxide	As2O5	1303-28-2
		Arsenic trioxide	As2O3	1327-53-3
		Calcium arsenate	Ca3(AsO4)2	7778-44-1
		Calcium arsenite	Ca3(AsO3)2	27152-57-4
		Potassium arsenite	KAsO2.HAsO2	10124-50-2
		Potassium arsenate	KH2AsO4	7784-41-0
		Lead arsenate	Pb3(AsO4)2	3687-31-8
		Lead Hydrogen Arsenate	AsHO4Pb	7784-40-9
		Other arsenic compounds	—	—
	Beryllium and beryllium compounds	Beryllium	Be	7440-41-7
		Beryllium oxide	BeO	1304-56-9
		Beryllium-aluminum alloy	Unspecified	12770-50-2
		Beryllium chloride	BeCl2	7787-47-5
		Beryllium fluoride	BeF2	7787-49-7
		Beryllium hydroxide	Be(OH)2	13327-32-7
		Beryllium phosphate	Be3(PO4)2	13598-15-7
		Beryllium sulfate	BeSO4	13510-49-1
		Beryllium sulfate tetrahydrate	BeSO4・4H2O	7787-56-6
		Beryl ore	Be3Al2Si6O18	1302-52-9
		Other beryllium compounds	—	—
	Bismuth and bismuth compounds	Bismuth	Bi	7440-69-9
		Bismuth trioxide	Bi4O6	1304-76-3
		Bismuth nitrate	BiN3O9	10361-44-1
		Other bismuth compounds	—	—
	Nickel and nickel compounds *2	Nickel (II) oxide	NiO	1313-99-1
		Nickel (II) carbonate	NiCO3	3333-67-3
		Nickel (II) sulfate	NiSO4	7786-81-4
		Nickel	Ni	7440-02-0
		Other nickel compounds	—	—
	Selenium and selenium compounds	Selenium	Se	7782-49-2
		Selenous acid	H2SeO3	7783-00-8
		Hydrogen selenide	H2Se	7783-7-5
		Sodium selenide	Na2Se	1313-85-5
		Selenium oxide	SeO	12640-89-0
		Sodium selenate	Na2SeO4	10112-94-4
		Dimethyl selenide	(CH3)2Se	593-79-3
		Selenium dioxide	SeO2	7446-8-4
		Other selenium compounds	—	—
	Thallium and thallium compounds	Thallium	Tl	7440-28-0
		Thallium nitrate	TlNO3	10102-45-1
		Thallium acetate	TlCH3COO	563-68-8
		Thallium carbonate	Tl2CO3	6533-73-9
		Thallium sulfate	Tl2SO4	7446-18-6

*1: Nickel compounds except for metal alloys (for example: stainless steel)

[Table 5-2] Breakdown List of Substances (Halogenated organic compounds)

Classification	Substance Group	Substance	Chemical Formula	CAS No.
Halogenated organic compounds	Polybrominated biphenyls (PBBs)	Polybrominated biphenyls	C12HXBr(10-X)	—
		2-Bromobiphenyl	C12H9Br	2052-7-5
		3-Bromobiphenyl	C12H9Br	2113-57-7
		4-Bromobiphenyl	C12H9Br	92-66-0
		Dibromobiphenyl	C12H8Br2	92-86-4
		Tribromobiphenyl	C12H7Br3	59080-34-1
		Tetrabromobiphenyl	C12H6Br4	40088-45-7
		Pentabromobiphenyl	C12H5Br5	56307-79-0
		Hexabromobiphenyl	C12H4Br6	59080-40-9
		Hexabromo-1,1'-biphenyl	C12H4Br6	36355-01-8
		Heptabromobiphenyl	C12H3Br7	35194-78-6
		Octabromobiphenyl	C12H2Br8	61288-13-9
		Nonabromo-1,1'-biphenyl	C12HBr9	27753-52-2
		Decabromobiphenyl	C12Br10	13654-09-6
		Other polybrominated biphenyls	—	—
	Polybrominated diphenyl ethers (PBDEs)	Polybrominated diphenyl ethers	C12HXBr(10-X)O	—
		Decabromodiphenyl ether	C12Br10O	1163-19-5
		Octabromodiphenyl ether	C12H2Br8O	32536-52-0
		Hexabromodiphenyl ether	C12H4Br6O	36483-60-0
		Pentabromodiphenyl ether	C12H5Br5O	32534-81-9
		Bromodiphenyl ether	C12H9BrO	101-55-3
		Dibromodiphenyl ether	C12H8Br2O	2050-47-7
		Tribromodiphenyl ether	C12H7Br3O	49690-94-0
		Tetrabromodiphenyl ether	C12H6Br4O	40088-47-9
		Heptabromodiphenyl ether	C12H3Br7O	68928-80-3
		Nonabromodiphenyl ether	C12HBr9O	63936-56-1
		Other polybrominated diphenyl ethers	—	—
	Polychlorinated biphenyls (PCBs)	Polychlorinated biphenyls	Unspecified	1336-36-3
		Polychlorinated terphenyls	Unspecified	61788-33-8
		Other PCBs	—	—
	Polychlorinated naphthalenes (one or more chlorine atoms)	Polychlorinated naphthalenes	Unspecified	70776-03-3
		Other polychlorinated naphthalenes	—	—
	Short chain chlorinated paraffins	Chlorinated paraffins (C10 Other short chain chlorinated paraffins to	Unspecified	85535-84-8
		Other short chain chlorinated	—	—
	Brominated flame retardants *2	Brominated flame retardant that falls under the notation of ISO 1043-4 code number FR (14) [Aliphatic/alicyclic brominated compounds]	—	—
		Brominated flame retardant that falls under the notation of ISO 1043-4 code number FR (15) [Aliphatic/alicyclic brominated compounds in combination with antimony compounds]	—	—
		Brominated flame retardant that falls under the notation of ISO 1043-4 code number FR (16) [Aromatic brominated compounds (excluding brominated diphenyl ether and biphenyls)	—	—
		Brominated flame retardant that falls under the notation of ISO 1043-4 code number FR (17) [Aromatic brominated compounds (excluding brominated diphenyl ether and biphenyls) in combination with antimony compounds]	—	—

Classification	Substance Group	Substance	Chemical Formula	CAS No.
Halogenated organic compounds	Brominated flame retardants *2	Brominated flame retardant that falls under the notation of ISO 1043-4 code number FR (22) [Aliphatic/alicyclic chlorinated and brominated compounds]	—	—
		Brominated flame retardant that falls under the notation of ISO 1043-4 code number FR (42) [Brominated organic phosphorous compounds]	—	—
		Poly (2,6-dibromo-phenylene oxide)	(C6H2Br2O)X	69882-11-7
		Tetradecabromo-diphenoxybenzene	C18Br14O2	58965-66-5
		1,2-bis (2,4,6-tribromo-phenoxy) ethane	C14H8Br6O2	37853-59-1
		3,5,3',5'-tetrabromo-bisphenol A (TBBA)	C15H12Br4O2	79-94-7
		TBBA, unspecified	—	30496-13-0
		TBBA-epichlorohydrin oligomer	(C15H12Br4O2.C3H5ClO)X	40039-93-8
		TBBA-diglycidyl-ether oligomer	—	70682-74-5
		TBBA carbonate oligomer	(C15H12Br4O2.CCl2O)X	28906-13-0
		TBBA carbonate oligomer, phenoxy end capped	(C7H5O2)(C16H10Br4O3)	94334-64-2
		TBBA carbonate oligomer, 2,4,6-tribromophenol terminated	(C7H2Br3O3)(C16H10Br4)	71342-77-3
		TBBA-bisphenol A-phosgene polymer	(C15H16O2.C15H12Br4O2)	32844-27-2
		Brominated epoxy resin end-capped with tribromophenol	—	139638-58-7
		Brominated epoxy resin end-capped with tribromophenol	—	135229-48-0
		TBBA-(2,3-dibromo-propyl-ether)	C21H20Br8O2	21850-44-2
		TBBA bis-(2-hydroxy-ethyl-ether)	C19H20Br4O4	4162-45-2
		TBBA-bis-(allyl-ether)	C21H20Br4O2	25327-89-3
		TBBA-dimethyl-ether	C17H16Br4O2	37853-61-5
		Tetrabromo-bisphenol S	C12H6Br4O4S	39635-79-5
		TBBS-bis-(2,3-dibromo-propyl-ether)	C18H14Br8O4S	42757-55-1
		2,4-dibromo-phenol	C6H4Br2O	615-58-7
		2,4,6-tribromo-phenol	C6H3Br3O	118-79-6
		Pentabromo-phenol	C6HBr5O	608-71-9
		2,4,6-tribromo-phenyl-allyl-ether	C9H7Br3O	3278-89-5
		Tribromo-phenyl-allyl-ether, unspecified	C9H7Br3O	26762-91-4
		Tetrabromo-cyclo-octane	C8H12Br4	31454-48-5
		1,2-dibromo-4-(1,2 dibromo-methyl)-cyclo-hexane	C8H12Br4	3322-93-8
		Disodium tetrabromophthalate	C8Br4O4Na2	25357-79-3
		TBPA Na salt	C8Br4O3	632-79-1
		Tetrabromophthalic anhydride	C10H6Br4O4	55481-60-2
		Bis (methyl) tetrabromophthalate (C=6~23)	C24H34Br4O4	26040-51-7
		2-hydroxy-propyl-2-(2-hydroxy-ethoxy)-ethyl-TBP	C15H16Br4O7	20566-35-2
		TBPA, glycol-and propylene-oxide esters	—	75790-69-1
		N,N'-Ethylene –bis-(tetrabromophthalimide)	C18H4Br8N2O4	32588-76-4
		Ethylene-bis(5,6-dibromonorbornane-2,3-dicarboximide)	C20H20Br4N2O4	52907-07-0
		2,3-dibromo-2-butene-1,4-diol	C4H6Br2O2	3234-02-4
		Dibromo-neopentyl-glycol	C5H10Br2O2	3296-90-0
		Dibromo-propanol	C3H6Br2O	96-13-9

Classification	Substance Group	Substance	Chemical Formula	CAS No.
Halogenated organic compounds	Brominated flame retardants *2	Tribromo-neopentyl-alcohol	C5H9Br3O	36483-57-5
		Poly tribromo-styrene	—	57137-10-7
		Tribromo-styrene	C8H5Br3	61366-34-1
		Dibromo-styrene grafted PP	—	171091-06-8
		Poly-dibromo-styrene	C8H6Br2	31780-26-4
		Bromo-/Chloro-paraffins	—	68955-41-9
		Bromo-/Chloro-alpha-olefin	—	82600-56-4
		Vinyl bromide	C2H3Br	593-60-2
		Tris-(2,3-dibromo-propyl)-isocyanurate	C12H15Br5N3O3	52434-90-9
		Tris-(2,4-dibromo-phenyl)-phosphate	C18H9Br5O4P	49690-63-3
		Tris (tribromo-neopentyl)-phosphate	C15H24Br9O4P	19186-97-1
		Chlorinated and brominated phosphate esther	—	125997-20-8
		Pentabromo-toluene	C7H3Br5	87-83-2
		Pentabromo-benzyl bromide	C7H2Br6	38521-51-6
		1,3-Butadiene homopolymer,brominated	—	68441-46-3
		Pentabromo-benzyl-acrylate, monomer	C10H5Br5O2	59447-55-1
		Pentabromo-benzyl-acrylate, polymer	(C10H5Br5O2)X	59447-57-3
		Decabromo-diphenyl-ethane	C14H4Br10O2	84852-53-9
		Tribromo-bisphenyl-maleinimide	C10H4Br3NO2	59789-51-4
		Brominated trimethylphenyl-lindane	C18H12Brn	—
		Other brominated flame retardant compounds	—	—
	Hexabromocyclododecane (HBCDD)	1,2,5,6,9,10-Hexabromocyclododecane	C12H18Br6	3194-55-6
		Hexabromocyclododecane, unspecified	C12H18Br6	25637-99-4
		Alpha-hexabromocyclododecane	C12H18Br6	134237-50-6
		Beta-hexabromocyclododecane	C12H18Br6	134237-51-7
		Gamma-hexabromocyclododecane	C12H18Br6	134237-52-8
	Vinyl chloride polymer (PVC)	Vinyl chloride polymer (PVC)	(CH2CHCl)n	9002-86-2

*2: Brominated flame retardants except for PBBs and PBDEs. Indicate with ISO code 1043-4 or CAS No.

[Table 5-3] Breakdown List of Substances (Others)

Classification	Substance Group	Substance	Chemical Formula	CAS No.
Others	Asbestos	Actinolite	Unspecified	77536-66-4
		Amosite	Unspecified	12172-73-5
		Anthophyllite	Unspecified	77536-67-5
		Chrysotile	Unspecified	12001-29-5
		Crocidolite	Unspecified	12001-28-4
		Tremolite	Unspecified	77536-68-6
		Asbestos	Unspecified	1332-21-4
		Other asbestos	—	—
	Azo dyes *3	Azo dyes that generate specific amines	—	—
	Ozone depleting substances *3	CFCs (Annex A Group I substances in the Montreal Protocol)	—	—
		Halons (Annex A Group II substances in the Montreal Protocol)	—	—
	(Isomers included)	Other CFCs (Annex B Group I substances in the Montreal Protocol)	—	—
		Carbon tetrachloride (Annex B Group II substance in the Montreal Protocol)	—	—
		1.1.1-trichloroethane (Annex B Group III substance in the Montreal Protocol)	—	—
		Bromochloromethane (Annex C Group III substance in the Montreal Protocol)	—	—
		Methyl bromide (Annex E substance in the Montreal Protocol)	—	—
		HBFCs (Annex C Group II substances in the Montreal Protocol)	—	—
		HCFCs (Annex C Group I substances in the Montreal Protocol)	—	—
	Radioactive substances	Uranium	U	—
		Plutonium	Pu	—
		Radon	Rn	—
		Americium	Am	—
		Thorium	Th	—
		Cesium	Cs	7440-46-2
		Strontium	Sr	7440-24-6
		Other radioactive substances	—	—
	Phthalates	Dibutylphthalate	C18H22O4	84-74-2
		Di(2-ethylhexyl)phthalate	C24H38O4	117-81-7
		Diisononyl phthalate	C24H38O4	28553-12-0
		1,2-benzenedicarboxylic acid diisodecyl ester	C28H46O4	26761-40-0
		Butyl benzyl phthalate	C19H20O4	85-68-7
		di-n-octyl phthalate	C6H4(COO(CH2)7CH3)2	117-84-0
		Diisobutyl phthalate	(C6H4)(COOCH2CH(CH3)2)2	84-69-5
		Di-n-hexyl phthalate	C20H30O4	84-75-3
	Trichloroethylene	Trichloroethylene	C2HCl3	1979-1-6
	Tetrachloroethylene	Tetrachloroethylene	C2Cl4	127-18-4
	Dichloromethane	Dichloromethane	CH2Cl2	1975-9-2
	White phosphorus	White phosphorus	P	7723-14-0
	Benzidine and its salt	Benzidine	C12H12N2	92-87-5
	4-aminobiphenyl and its salt	4-aminobiphenyl	C12H11N	92-67-1
	4-nitrobiphenyl and its salt	4-nitrobiphenyl	C12H9NO2	92-93-3
	Bis(chlorometyl) ether	Bis(chlorometyl)ether	C2H4Cl2O	542-88-1
	Beta-naphthylamine and its salt	Beta-naphthylamine and its salt	C10H7NH2	91-59-8
	Benzene	Benzene	C6H6	71-43-2
	Perchlorate compounds	Lithium perchlorate	LiClO4	7791-3-9
		Other perchlorate compounds	—	—
	Tris (2-chloroethyl) phosphate (TCEP)	Tris (2-chloroethyl) phosphate (TCEP)	C6H12Cl3O4P / (ClCH2CH2O)3PO	115-96-8

Classification	Substance Group	Substance	Chemical Formula	CAS No.
	PFC, SF6,HFC	Carbon tetrafluoride(Perfluoromethane)	CF4	75-73-0
		Perfluoroethane (Hexafluoroethane)	C2F6	76-16-4
		Perfluoropropane(Octafluoroproane)	C3F8	76-19-7
		Perfluorobutane (Decafluorobutane)	C4F10	355-25-9
		Perfluoropentane(Dodecafluoropentane)	C5F12	678-26-2
		Perfluorohexane(Tetradecafluorohexane)	C6F14	355-42-0
		Perfluorocyclobutane	c-C4F8	115-25-3
		Sulfur Hexafluoride (SF6)	SF6	2551-62-4
		Trifluoromethane - (HFC-23)	CHF3	75-46-7
		Difluoromethane - (HFC-32)	CH2F2	1975-10-5
		Methyl fluoride – (HFC-41)	CH3F	593-53-3
		2H,3H-Decafluoropentane – (HFC-43-10mee)	CF3CHFCHFCF2CF3	138495-42-8
		Pentafluoroethane (HFC-125)	C2HF5	354-33-6
		1,1,2,2-Tetrafluoroethane – (HFC-134)	CHF2CHF2	359-35-3
		1,1,1,2-Tetrafluoroethane – (HFC-134a)	CH2FCF3	811-97-2
		1,1-Difluoroethane – (HFC-152a)	CH3CHF2	75-37-6
		1,1,2-Trifluoroethane–(HFC-143)	CH2FCHF2	430-66-0
		1,1,1-Trifluoroethane – (HFC-143a)	CH3CF3	420-46-2
		2H-Heptafluoropropane– (HFC-227ea)	CF3CHFCF3	431-89-0
		1,1,1,2,2,3-hexafluoro-propane (HFC-236cb)	CH2FCF2CF3	677-56-5
		1,1,1,2,3,3-Hexafluoropropane –(HFC-236ea)	CHF2CHFCF3	431-63-0
		HFC-1,1,1,3,3,3-Hexafluoropropane – (HFC-236fa)	CF3CH2CF3	690-39-1
		1,1,2,2,3-Pentafluoropropane –(HFC-245ca)	CH2FCF2CHF2	679-86-7
		1,1,1,3,3-Pentafluoropropane –(HFC-245fa)	CHF2CH2CF3	460-73-1
		1,1,1,3,3-Pentafluorobutane – (HFC-365mfc)	CF3CH2CF2CH3	406-58-6
	Formaldehyhde	Formaldehyhde	H2CO	50-00-0
	Perfluorooctane sulfonyl fluoride(PFOSF)	Perfluorooctane sulfonyl fluoride(PFOSF)	C8F18O2S	307-35-7
	Pentachlorobenzene	Pentachlorobenzene	C6HCl5	608-93-5
	r-1,c-2,t-3,c-4,t-5,t-6-hexachlorocyclohexane(Alpha hexachlorocyclohexane)	r-1,c-2,t-3,c-4,t-5,t-6-hexachlorocyclohexane(Alpha hexachlorocyclohexane)	C6H6Cl6	319-84-6
	r-1,t-2,c-3,t-4,c-5,t-6-hexachlorocyclohexane (Beta hexachlorocyclohexane)	r-1,t-2,c-3,t-4,c-5,t-6-hexachlorocyclohexane (Beta hexachlorocyclohexane)	C6H6Cl6	319-85-7
	r-1,c-2,t-3,c-4,c-5,t-6-hexachlorocyclohexane（Gamma hexachlorocyclohexane or lindane）	r-1,c-2,t-3,c-4,c-5,t-6-hexachlorocyclohexane（Gamma hexachlorocyclohexane or lindane）	C6H6Cl6	58-89-9
	Decachloropentacyclo [5.3.0.0(2,6).0(3,9).0(4,8)] decane-5-one(Chlordecone)	Decachloropentacyclo [5.3.0.0(2,6).0(3,9).0(4,8)] decane-5-one(Chlordecone)	C10Cl10O	143-50-0
	2,4-Dinitrotoluene	2,4-Dinitrotoluene	C7H6N2O4	121-14-2
	Anthracene oil	Anthracene oil	—	90640-80-5
	Anthracene oil, anthracene paste, distn. Lights	Anthracene oil, anthracene paste, distn. Lights	—	91995-17-4
	Anthracene oil, anthracene paste, anthracene fraction	Anthracene oil, anthracene paste, anthracene fraction	—	91995-15-2
	Anthracene oil, anthracene-low	Anthracene oil, anthracene-low	—	90640-82-7
	Anthracene oil, anthracene paste	Anthracene oil, anthracene paste	—	90640-81-6
	Aluminosilicate, Refractory Ceramic Fibres	Aluminosilicate, Refractory Ceramic Fibres	—	—
	Zirconia Aluminosilicate, Refractory Ceramic Fibres	Zirconia Aluminosilicate, Refractory Ceramic Fibres	—	—
	Coal tar pitch, high temperature	Coal tar pitch, high temperature	—	65996-93-2
	Acrylamide	Acrylamide	C3H5NO	1979-6-1
	Dimethyl fumarate(DMF)	Dimethyl fumarate(DMF)	C6H8O4	624-49-7

Classification	Substance Group	Substance	Chemical Formula	CAS No.
Others	Perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS-related compounds	Perfluorohexane-1-sulphonic acid	C6HF13O3S	355-46-4
		Ammonium perfluorohexane-1-sulphonate	C6H4F13NO3S	68259-08-5
		Potassium perfluorohexane-1-sulphonate	C6F13KO3S	3871-99-6
	C9-C14 linear and/or branched perfluorocarboxylic acids (C9-C14 PFCAs), their salts and C9-C14 PFCAs-related substances	Pentacosafluorotridecanoic acid	C13HF25O2	72629-94-8
		Tricosafluorododecanoic acid	C12HF23O2	307-55-1
		Henicosafluoroundecanoic acid	C11HF21O2	2058-94-8
		Heptacosafluorotetradecanoic acid	C14HF27O2	376-06-7
		Perfluorononan-1-oic acid	C9HF17O2	375-95-1
		Ammonium salts of perfluorononan-1-oic-acid	C9H4F17NO2	4149-60-4
		Sodium salts of perfluorononan-1-oic-acid	C9F17NaO2	21049-39-8
		Nonadecafluorodecanoic acid (PFDA)	C10HF19O2	335-76-2
		Ammonium nonadecafluorodecanoate	C10H4F19NO2	3108-42-7
		Sodium nonadecafluorodecanoate	C10F19NaO2	3830-45-3

*3: The breakdowns of specific amines and ozone depleting substances are shown in Tables 3 and 4 respectively.
Although Class II substances are not prohibited, they are included in the scope of investigation.

[Revision History]

Revision	Date	Contents
1	December 10. 1998	Original was issued
2	July 1st, 2004	Completely revised
3	July 1st, 2005	page 1 Explanation "This is the guideline…" was added page 2 Preface partially was revised page 6 "Since neither an alternative…" was added on (4) Controlled Chemical Substances (Rand C) page 13 - 16 [Table 2] list was revised. ・ Changed chemicals (gold, silver, copper, palladium and magnesium deleted) ・ Threshold value were added (RoHS directive materials) ・ Applications were corrected based on the latest RoHS directive ・ Remarks were revised (Enactment form) Form 1 Some questions are separated for manufacturing company and non-manufacturing company Form 2 Definition of "Not contain" was changed Form 3 Example were added
4	September 19th, 2006	page 2 Preface partially was revised page 13 - 18 [Table 2] list was revised. ・ Applications were corrected based on the latest information of RoHS directive ・ Materials and the threshold values were added according to the revised Industrial Safety and Health Law. ・ Remarks were revised
5	September 1st, 2008	Page 2 Preface partially was revised. Page 5-6 In “Definitions,” minerals, substances, preparation and article were added. Page 6 “We will give preferential treatment to partners implementing systems for properly controlling chemical substances contained in materials delivered to our company.“ added. Based on this, to “Environmental Protection Activity Survey,” survey on “Product Environmental Quality Control” added to “Corporate Constitution” which has been surveyed conventionally. Page 7-9 A table of submitted documents were added and brief explanation of submitted documents partly were revised. Page 11-16 Attached table 2 “List of Prohibited/Controlled Chemical Substances” changed. ・ Applications partly were added in accordance with latest information of RoHS directives ・ Addition of analysis method ・ Class 1 specified chemical substance of Chemical Substances Control Law were added ・ Perfluorooctanesulfonic acid (PFOS) and its salts were added.
5	September 1st, 2008	[Established form] Form 1 1-1 Corporate Constitution and 1-2 Product Environmental Quality Control were established Form 3 3-1 for chemical substances and preparations and 3-2 for article were established Form 4 Review of the title of the form subject to guarantee

Revision	Date	Contents
6	October 1st, 2009	Page 1, 6 Revising the words of “Constitution of Enterprise” to Environmental Management System Page 7-8 JAMP MSDSplus and AIS were added in a table of submitted documents. Brief explanation of submitted documents partly was revised. Page 11-16 - [Table 2] List of Prohibited/Controlled Chemical Substances was changed. - Thresholds of Cd, Pb, Hg in battery were added. - Applications partly were added in accordance with latest information of RoHS directive. - Cobalt dichloride was added. - C rank application of Dichloromethane was added. - 5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene) was added - Anthracene was added. - Tris (2-chloroethyl) phosphate was added. - PFC, SF6 and HFC were added. - Formaldehyhde was added. - Perchlorate compounds were added. [Established form] Form 1-1 - The name of form was revised. Form 1-2 - The name of form was revised. Form 2 - The name of form was revised. - Words of certificate were reviewed. - Table of target products was added. Form 3-1 - The name of form was revised. - Inputting items were added - Notes were reviewed. Form 3-2 - The name of form was revised. - Inputting items were added - Notes were reviewed. Form 4 - The name of form was revised. Form 5 - The name of form was revised.
7	2010. 6. 1	Page 11-17 - [Table 2] List of Prohibited/Controlled Chemical Substances was changed. - Applications partly were added in accordance with latest information of RoHS directive - Organotin compounds other than Bis (tri-n-butyltin) oxide (TBTO), Tributyltins (TBTs) and triphenyltins (TPTs) were added.- Diisobutyl phthalate and di-n-hexyl phthalate were added to target applies of phthalates. - C rank application of Dichloromethane was added. - Class I specified chemical substances of Chemical Substances Control Law were added. - SVHCs of REACH regulation were added. - Dimethyl fumarate(DMF) was added. information of RoHS directive. - Organotin compounds other than Bis (tri-n-butyltin) oxide (TBTO), Tributyltins (T BTs) and triphenyltins (TPTs) were added.- Diisobutyl phthalate and di-n-hexyl phthalate were added to target applies of phthalates. - C rank application of Dichloromethane was added. - Class I specified chemical substances of Chemical Substances Control Law were added - SVHCs of REACH regulation were added. - Dimethyl fumarate(DMF) was added.
8	2012. 3. 1	Page 14-23 - [Table 2] List of Prohibited/Controlled Chemical Substances was changed. - Applications were partly added in accordance with the latest information regarding the RoHS - Applications were partly added in accordance with the latest revisions of the European Union. REACH Regulation “Authorized”and ”Restricted”. - SVHCs of European Union REACH Regulation were added. - Exceptions of Hexachlorobenzene were added. - C rank application of other chlorine compounds was added. Page 20 *2 was revised. *3 was added.

Revision	Date	Contents
8.1	2012. 5. 1	Page 14-23 - [Table 2] List of Prohibited/Controlled Chemical Substances was partially corrected -[Form 3-2] Purpose of containing was revised . -[Appendix 2] Table of intended use code was revised.
8.2	2012. 5. 15	Page 14-23 - [Table 2] List of Prohibited/Controlled Chemical Substances was partially corrected
9.1	2013.10.15	We divided our conventional “Kyocera Green Procurement Guideline” into two and established guidelines “Kyocera Guideline on Environmentally Hazardous Substances” (this Guideline) that specifies the standards for product specifications for promoting green procurement and “Kyocera Guideline on Environmental Protection Activities (for Partners)” that describes the guiding principles for our idea of environmental protection activities. In concurrence with this, the description sentence in the first part was changed (P. 1-5) and Form 1 was transferred to the attached materials for “Kyocera Guideline on Environmental Protection Activities (for Partners).” <Change/addition to information in Attached Table 2> - No1 cadmium and its compounds Addition of threshold value lower than 100 ppm for cadmium (rank B) contained in photoresistor for analog optocouplers used in industrial audio devices starting on deadline January 1, 2014 - No3 lead and its compounds (1) Instant change in the deadline regarding lead contained in dielectric ceramic in capacitors with rated voltage smaller than 125 VAC or 250 VDC (2) Instant change in the deadline regarding lead contained in connector systems other than C-press compliant pin (3) Dielectric for capacitors used in parts of integrated circuits and discrete devices Addition of threshold value lower than 1000 ppm regarding lead contained in lead zirconate titanate (PZT) based on ceramic starting on deadline July 22, 2016 - No4 mercury and its compounds (1) Fluorescent lamps other than electric bulb type and compact type (small) fluorescent lamps or straight tube fluorescent lamps whose mercury content (per lamp) does not exceed (the following usage quantities): - Straight tube fluorescent halo-phosphate lamps with diameters larger than 28 mm: Instant change in deadline for 10 mg (2) Electric bulb type and compact type (small) fluorescent lamps whose mercury contents per burner do not exceed (the following quantities) (i) Lower than 30 W for general lighting purposes: Changed from 3.5 mg to 2.5 mg (ii) Standard service life using three band fluorescent substance with lamp diameter exceeding 28 mm: Changed from 5 mg to 3.5 mg (iii) Cold cathode fluorescent lamps (CCFLs) and external electrode fluorescent lamps (EEFLs) used for special applications whose mercury content per lamp do not exceed (the following quantity) - Long lamps (exceeding 1500 mm): Changed from 13 mg to 10 mg - No5 tri-substituted organostannic compounds (TBTO, TBTs, TPTs) Clear description of 1000 ppm since the rank B threshold values was not stated - No79 hexabromocyclododecane (HBCDD) Deadline changed from January 1, 2015 to January 1, 2014 - Addition of SVHC substances under European REACH regulation No.107 to No.118 (7th)/No.119 to No.152 (8th)/No.153 to No.156 (9th) - Addition in Remarks of Attached Table 2 in order to clarify the substances specified by IEC62474 (International Electrotechnical Commission) Description “MSDS” in the main text corrected to “SDS”
10	2014.3.1	We append the banned definition for a hazardous materials in P3 4 c Additional of SVHC materials in EU REACH No.157 – 161 (10th additional)
10.1	2014.9.1	Additional of SVHC materials in EU REACH No.162 – 164 (11th additional)
10.2	2015.3.1	Additional of SVHC materials in EU REACH No.165 – 168 (12th additional)
11	2015.9.1	<Change/addition to information in Attached Table 2> ・Additional of SVHC materials in EU REACH No.170 – 171 (13th additional) ・Adding 「Red phosphorus」 to No.29 ・Adding 「Polycyclic aromatic hydrocarbons (PAH)」 to No.80, and adding ※14 to P20 ・The deletion of No.63 "Anthracene" in previous version because it is included in the Polycyclic aromatic

Revision	Date	Contents
11	2015.9.1	・Changing the year and month of "Note1" in P20 to April 2015 ・No.1 Cadmium and its compounds ※Instant change in the deadline regarding 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 ※Instant change in the deadline regarding Cadmium in photoresist for analog opto-coupler to be used for professional audio equipment. ・No.3 Lead and its compounds ※Instant change in the deadline regarding Lead in linear incandescent lamps with silicate coated tubes. ・No.4 Mercury and its compounds ※Instant change in the deadline regarding Mercury in High Pressure Mercury (vapour) lamps (HPMV) ・No.6 Dibutyltin (DBT) compounds ※Instant change in the deadline regarding More than 1000 ppm (or0.1 wt%) of the tin contained in materials ・No.11 Arsenic and arsenic compounds ※Instant change in the deadline regarding B rank use ・No.38 Phthalates ※Instant change in the deadline regarding B rank use ・No.64 Tris(2-chloroethyl) phosphate ※Instant change in the deadline regarding B rank use ・No.79 Hexabromocyclododecane (HBCDD) ※Instant change in the deadline regarding B rank use
11.1	2016.2.1	Additional of SVHC materials in EU REACH No.172 – 176 (14th additional)
11.2	2017.2.15	Additional of SVHC materials in EU REACH No.177 – 181 (15th,16th additional)
12	2018.7.1	Added "chemSHERPA CI", "chemSHERPA AI" and "* 2" to Table 1 in P7,8 Added "chemSHERPA CI" and "chemSHERPA AI" to [Outline description of submitted documents] in P8 <Change/addition to information in Attached Table 2> ・No.6 Dibutyltin (DBT) compounds ※Deliete C rank use ・No.7 Dioctyltin (DOT) compounds ※Adding C rank use ・No.26 Vinyl chloride polymer (PVC) ※Adding B rank use ・No.27 Asbestos ※Adding Intentional Use Prohibit ・No.36 Azo dyes that generate certain specific amines ※Adding Threshold value : 30ppm ・No.38 Phthalates ※Changed the standard based on RoHS Directive in July,2019 ・No.43 Perfluorooctane sulfonate (PFOS) and its salts ※Add "Stockholm Convention on Persistent Organic Pollutants" in remarks ・No.66 Formaldehyhde ※Adding B rank use ・No78 Dimethyl fumarate(DMF) ※Adding Threshold value : 0.1ppm ・No79 Hexabromocyclododecane (HBCDD) ※Adding Threshold value : 100ppm ・Additional of SVHC materials in EU REACH No.182 – 190 (17th & 18th additional)
13	2020.4.15	On P5, add the following as Item 6: [Request concerning control of 4 phthalate esters restricted under RoHS Directives/Reach Regulations] [Former Item 6] becomes [Item 7] and [former Item 7] becomes [Item 8]. <Change/addition to information in Attached Table 2> ・No.1 Cadmium and cadmium compounds ※Reflect content of revisions to usage exemptions in the latest RoHS Directive ・No.3 Lead and its compounds ※Reflect content of revisions to usage exemptions in the latest RoHS Directive ・No.4 Mercury and its compounds ※Reflect content of revisions to usage exemptions in the latest RoHS Directive ・No.6 Dibutyltin (DBT) compounds ※Restrictions on applications for Rank B substances, and addition of Rank C substances ・No.22 Polychlorinated naphthalenes ※Amendment to chlorine numbers

Revision	Date	Contents
13	2020.4.15	・No.26 Vinyl chloride polymer (PVC) ※amendments to time limits for complete abolition ・No.29 Red phosphorus ※Restrictions on Rank B substance applications, and amendments to time limits for complete ・No.38 Phthalates ※Addition of details on REACH Regulation restrictions for Rank B substances ・No.43 Perfluorooctane sulfonate (PFOS) and its salts ※Additional Rank B substance applications ・No.66 Formaldehyhde ※Amendments to details of Rank B applications and Rank C applications ・No.156 APFO(Ammonium pentadecafluorooctanoate) ※Amendments to details of listed substance names ・No.157 PFOA(Pentadecafluorooctanoic acid) ※Additional Rank B substance applications ・Additional of SVHC materials in EU REACH No.191 – 210 (19th,20th,21st & 22nd additional) ・Changed year and month of RoHS Directive and REACH Regulation of "Note 1"in P23
14	2021.11.1	・P3：Change Kyocera's Environmental Charter to Kyocera Group Environmental Safety Policy ・P4：Add the following as Item 2(2):「purchases made by Non-production sector」 ・P5：Cange Material Safety Data Sheet to Safty Date Sheet ・P7-8："JAMP MSDSplus" and "JAMP AIS" deleted from [Table 1:Submitted documents for information on substances of environmental concerns] and [Explanation of submitted documents]. * 2 has been changed. ・P9：Partial rewriting of the information in Item 6 <Change/addition to information in Attached Table 2> ・Additional of * 9 Substance No.5, 21, 23, 120, 157, 211, 212 ・Ranked B for all applications by U.S. TSCA regulations Substance No.56, 214, 215 ・Ranked C by U.S. TSCA regulations Substance No.213, 216 ・Additional of * 15 Substance No.213 ・Ranked C by CEPA(Canadian Environmental Protection Act) * 14 Substance No.189, 231 ・Change SVHC to Authorization in EU REACH Substance No.95, 160, 162, 164～167, 170, 171, 173,174 ・Additional of SVHC materials in EU REACH Substance No.217 – 230 (23rd,24th & 25th additional)
14.1	2023.2.28	・Additional of SVHC materials in EU REACH No.232 – 245 (26th,27th, & 28th additional)

Revision	Date	Contents
15	2024.2.16	*Refer to the attached "History Details_Revision15 " for details of each substance and amendments. ・Update of Kyocera Group Environmental Safety Policy ・3. Definition of Terms (10) SDS : Added "PDSC Law (Poisonous and Deleterious Substances Control Law)" ・[Explanation of submitted documents] ■ SDS : Added "PDSC Law" ・Addition of new substances or substance groups (SVHC, Stockholm Convention) ・Change of rank from C to B (US-TSCA, the Chemical Substances Control Law, Stockholm Convention, RoHS Directive, REACH (Restriction)) ・Threshold change ・Reference laws and regulations update in Remarks column ・Modification of Breakdown List of Substances ・Correction of errors ・Deleting duplicate items　etc.

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[History Details_Revision15]

Revised Table	Category of the amendment	No.	Substance group	Rank	Applications	Threshold value	Reference laws and regulations	Amendment details
Table2	Addition of new substances or substance groups	247 *new	bis(4-chlorophenyl) sulphone	C	All applications	—	EU REACH	Added as the 29th batch of SVHC
Table2	Addition of new substances or substance groups	248 *new	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	C	All applications	—	EU REACH	Added as the 29th batch of SVHC
Table2	Addition of new substances or substance groups	249 *new	2,4,6-tri-tert-butylphenol	C	All applications	—	EU REACH	Added as the 30th batch of SVHC
Table2	Addition of new substances or substance groups	250 *new	2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329)	C	All applications	—	EU REACH	Added as the 30th batch of SVHC
Table2	Addition of new substances or substance groups	251 *new	2-(dimethylamino)-2-[(4-methylphenyl)methyl]-1-[4-(morpholin-4-yl)phenyl]butan-1-one	C	All applications	—	EU REACH	Added as the 30th batch of SVHC
Table2	Addition of new substances or substance groups	252 *new	Bumetrizole (UV-326)	C	All applications	—	EU REACH	Added as the 30th batch of SVHC
Table2	Addition of new substances or substance groups	253 *new	Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol	C	All applications	—	EU REACH	Added as the 30th batch of SVHC
Table2	Addition of new substances or substance groups	254 *new	Methoxychlor	B	All applications	—	Stockholm Convention	Added as the POPs in Annex A
Table2	Addition of new substances or substance groups	255 *new	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one (3-benzylidene camphor; 3-BC)	C	All applications	—	EU REACH	Added as SVHC *past omission of listing
Table2	Addition of new substances or substance groups	256 *new	Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride; TMA)	C	All applications	—	EU REACH	Added as SVHC *past omission of listing
Table2	Addition of new substances or substance groups	257 *new	4-(1,1,3,3-tetramethylbutyl)phenol	C	All applications	—	EU REACH	Added as SVHC *past omission of listing
Table2	Rank change	213	Phenol, Isopropylated Phosphate (3:1) (PIP 3:1)	B	All applications	—	US-TSCA	Rank change due to PBT designation ・Rank change: C→B ・Date of restriction: - → immediate ・* 15 was deleted.
Table2	Rank change ＊with change of a substance group name and addition of a new list	183	Perfluorohexane-1-sulphonic acid and its salts	B	All applications	—	CSCL (the Chemical Substances Control Law)	Rank change due to Class I specified chemical substance specification ・Rank change: C→B ・Date of restriction: - → immediate ・Remarks: " *9 " was added ・Descriptions of a substance group was changed. (After: Perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS-related compounds) ・Addition of new Breakdown List of Substances
Table2	Rank change	43	Perfluorooctane sulfonate (PFOS) and its salts	B	Semiconductor resists	—	CSCL	3 applicable uses of C rank were changed to B rank because the exemptions were removed from the law. →Delete Items
Table2	Rank change	43	Perfluorooctane sulfonate (PFOS) and its salts	B	Etching agents for semiconductors (limited to voltage filters and high-frequency compound semiconductors)	—	CSCL	3 applicable uses of C rank were changed to B rank because the exemptions were removed from the law. →Delete Items
Table2	Rank change	43	Perfluorooctane sulfonate (PFOS) and its salts	B	Photo films for industrial purposes	—	CSCL	3 applicable uses of C rank were changed to B rank because the exemptions were removed from the law. →Delete Items
Table2	Rank change	189	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 thereof]	B	All applications	—	Stockholm Convention	Rank change for inclusion in Annex A ・Rank change：C→B ・Date of restriction：— → immediate ・Remarks: "Stockholm Convention" was added
Table2	Rank change	167	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	B	All applications	—	Stockholm Convention	Rank change for inclusion in Annex A ・Rank change：C→B ・Date of restriction：— → immediate ・Remarks: "Stockholm Convention" was added
Table2	Rank change	1	Cadmium and cadmium compounds	B	Cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses	100ppm	EU RoHS Directive	Rank change for "No longer valid" or "Valid - no longer renewable" use ・Rank change：C→B ・Date of restriction：— → immediate ・Threshold value：— → 100ppm
Table2	Rank change	2	Hexavalent chromium compounds	B	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.	1000ppm	EU RoHS Directive	Rank change for "No longer valid" or "Valid - no longer renewable" use ・Rank change：C→B ・Date of restriction：— → immediate ・Threshold value：— → 1000ppm
Table2	Rank change	3	Lead and lead compounds	B	Lead in glass of cathode ray tubes.	1000ppm	EU RoHS Directive	Rank change for "No longer valid" or "Valid - no longer renewable" use ・Rank change：C→B ・Date of restriction：— → immediate ・Threshold value：— → 1000ppm
Table2	Rank change	3	Lead and lead compounds	B	Lead in solders for servers, storage and storage array systems, Network infrastructure equipment for switching, signalling, transmission, and network management for telecommunications.	1000ppm	EU RoHS Directive	Rank change for "No longer valid" or "Valid - no longer renewable" use ・Rank change：C→B ・Date of restriction：— → immediate ・Threshold value：— → 1000ppm
Table2	Rank change	3	Lead and lead compounds	B	Lead in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses.	1000ppm	EU RoHS Directive	Rank change for "No longer valid" or "Valid - no longer renewable" use ・Rank change：C→B ・Date of restriction：— → immediate ・Threshold value：— → 1000ppm
Table2	Rank change	3	Lead and lead compounds	B	Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body.	1000ppm	EU RoHS Directive	Rank change for "No longer valid" or "Valid - no longer renewable" use ・Rank change：C→B ・Date of restriction：— → immediate ・Threshold value：— → 1000ppm

Revised Table	Category of the amendment	No.	Substance group	Rank	Applications	Threshold value	Reference laws and regulations	Amendment details
Table2	Rank change	4	Mercury and mercury compounds	B	Mercury in single capped (compact) fluorescent lamps not exceeding (per burner): ・For general lighting purposes < 30 W: 2.5 mg ・For general lighting purposes ≥ 30 W and < 50 W: 3.5 mg ・For general lighting purposes ≥ 50 W and < 150 W: 5 mg ・For general lighting purposes ≥ 150 W: 15 mg ・For general lighting purposes with circular or square structural shape and tube diameter ≤ 17 mm:7 mg ・For special purposes: 5 mg	1000ppm	EU RoHS Directive	Rank change for "No longer valid" or "Valid - no longer renewable" use ・Rank change：C→B ・Date of restriction：— → immediate ・Threshold value：— → 1000ppm
Table2	Rank change	4	Mercury and mercury compounds	B	Mercury in double-capped linear fluorescent lamps for general lighting purposes not exceeding (per lamp): ・Tri-band phosphor with normal lifetime and a tube diameter < 9 mm:4 mg ・Tri-band phosphor with normal lifetime and a tube diameter ≥ 9 mm and ≤ 17 mm :3 mg ・Tri-band phosphor with normal lifetime and a tube diameter > 17 mm and ≤ 28 mm:3.5 mg ・Tri-band phosphor with normal lifetime and a tube diameter > 28 mm:3.5mg ・Tri-band phosphor with long lifetime (≥ 25 000 h): 5 mg	1000ppm	EU RoHS Directive	Rank change for "No longer valid" or "Valid - no longer renewable" use ・Rank change：C→B ・Date of restriction：— → immediate ・Threshold value：— → 1000ppm
Table2	Rank change	4	Mercury and mercury compounds	B	Mercury in other fluorescent lamps not exceeding (per lamp): ・Non-linear tri-band phosphor lamps with tube diameter > 17 mm:15mg	1000ppm	EU RoHS Directive	Rank change for "Valid - no longer renewable" use ・Rank change：C→B ・Date of restriction：— → immediate ・Threshold value：— → 1000ppm ・Correction of errors : "ires on 31 December 2012; 3,(*) " was deleted
Table2	Rank change	4	Mercury and mercury compounds	B	Mercury in other low pressure discharge lamps (per lamp) :15mg	1000ppm	EU RoHS Directive	Rank change for "No longer valid" use ・Rank change：C→B ・Date of restriction：— → immediate ・Threshold value：— → 1000ppm
Table2	Rank change	4	Mercury and mercury compounds	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 ・P ≤ 155 W:30 mg ・155W＜P≦405W：40mg ・P > 405 W:40mg	1000ppm	EU RoHS Directive	Rank change for "No longer valid" use ・Rank change：C→B ・Date of restriction：— → immediate ・Threshold value：— → 1000ppm
Table2	Rank change ＊with addition of a new substance group	246 *new	C9-C14 linear and/or branched perfluorocarboxylic acids (C9-C14 PFCAs), their salts and C9-C14 PFCAs-related substances	B	All applications <Chemical Substances> C9-C14 PFCAs and their salts	25ppb (0.025ppm)	EU REACH（IEC62474）	Added for inclusion in IEC62474 as a REACH restricted substance. Since individual substance groups have already been listed in the guidelines as SVHC (C rank), these single items have been deleted and consolidated into this section. Specific chemical names was included in the Breakdown List of Substances.
Table2	Rank change ＊with addition of a new substance group	246 *new	C9-C14 linear and/or branched perfluorocarboxylic acids (C9-C14 PFCAs), their salts and C9-C14 PFCAs-related substances	B	All applications <Chemical Substances> C9-C14 PFCAs-related substances	260ppb (0.26ppm) *the sum of substances	EU REACH（IEC62474）	Same as above
Table2	Rank Change *Delete Item	121	Pentacosafluorotridecanoic acid	B	(Deleted)	(Deleted)	EU REACH（IEC62474）	The item was deleted (Consolidated into No. 246) and listed in the Breakdown List of Substances (Table 5-3) instead. ・Rank change：C→B
Table2	Rank Change *Delete Item	122	Tricosafluorododecanoic acid	B	(Deleted)	(Deleted)	EU REACH（IEC62474）	The item was deleted (Consolidated into No. 246) and listed in the Breakdown List of Substances (Table 5-3) instead. ・Rank change：C→B
Table2	Rank Change *Delete Item	123	Henicosafluoroundecanoic acid	B	(Deleted)	(Deleted)	EU REACH（IEC62474）	The item was deleted (Consolidated into No. 246) and listed in the Breakdown List of Substances (Table 5-3) instead. ・Rank change：C→B
Table2	Rank Change *Delete Item	124	Heptacosafluorotetradecanoic acid	B	(Deleted)	(Deleted)	EU REACH（IEC62474）	The item was deleted (Consolidated into No. 246) and listed in the Breakdown List of Substances (Table 5-3) instead. ・Rank change：C→B
Table2	Rank Change *Delete Item	176	Perfluorononan-1-oicacid and its sodium and ammonium salts	B	(Deleted)	(Deleted)	EU REACH（IEC62474）	The item was deleted (Consolidated into No. 246) and listed in the Breakdown List of Substances (Table 5-3) instead. ・Rank change：C→B
Table2	Rank Change *Delete Item	179	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	B	(Deleted)	(Deleted)	EU REACH（IEC62474）	The item was deleted (Consolidated into No. 246) and listed in the Breakdown List of Substances (Table 5-3) instead. ・Rank change：C→B
Table2	Reference laws and regulations update in Remarks column	79	Hexabromocyclododecane (HBCDD)	B	All applications	—	CSCL	・Remarks: " *9 " was added
Table2	Threshold change	20	Polybrominated diphenyl ethers (PBDEs)	B	All applications <Chemical Substances> Hexabromodiphenyl ether Pentabromodiphenyl ether Tetrabromodiphenyl ether Heptabromodiphenyl ether	—	CSCL	・Class I Specified Chemical Substances were separated ・Threshold value：1000ppm→ - ・Remarks: " *9 " was added
Table2	Item change	20	Polybrominated diphenyl ethers (PBDEs)	B	All applications <Chemical Substances> Decabromodiphenyl ether	—	CSCL US-TSCA REAC（SVHC）	・Moved "No. 120 Decabromodiphenyl ether (Deca BDE)" to this item ・Remarks: " *9, US-TSCA, REACH(SVHC)" was added
Table2	Item change *Item deletion	120	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	(Deleted)	All applications	(Deleted)	—	Deleted the item and consolidated into No. 20
Table2	Threshold change	28	White phosphorus	B	White phosphorus matches	—	Industrial Safety and Health Law	・Threshold value：10000ppm→-に変更 ・Correction of errors : *9→*8
Table2	Reference laws and regulations update in Remarks column	39	Trichloroethylene	B	All applications	—	EU REACH	・Remarks : Blank → REACH(Authorization)
Table2	Reference laws and regulations update in Remarks column	68	2,4-Dinitrotoluene	C	All applications	—	EU REACH	・Remarks : Blank → REACH(Authorization)
Table2	Reference laws and regulations update in Remarks column	69	Anthracene oil	C	All applications	—	EU REACH	・Remarks : Blank → REACH(Authorization)

Revised Table	Category of the amendment	No.	Substance group	Rank	Applications	Threshold value	Reference laws and regulations	Amendment details
Table2	Reference laws and regulations update in Remarks column	76	Coal tar pitch, high temperature	C	All applications	—	EU REACH	・Remarks : Blank → REACH(Authorization)
Table2	Reference laws and regulations update in Remarks column	91	1,2-Benzenedicarboxylic acid,di-C7-11-branched and linear alkyl esters	C	All applications	—	EU REACH	・Remarks : REACH（SVHC）→ REACH(Authorization)
Table2	Reference laws and regulations update in Remarks column	96	Formaldehyde, oligomeric reaction products with aniline	C	All applications	—	EU REACH	・Remarks : REACH（SVHC）→ REACH(Authorization)
Table2	Reference laws and regulations update in Remarks column	97	Bis(2-methoxyethyl) phthalate	C	All applications	—	EU REACH	・Remarks : REACH（SVHC）→ REACH(Authorization)
Table2	Reference laws and regulations update in Remarks column	100	1,2-Dichloroethane	C	All applications	—	EU REACH	・Remarks : REACH（SVHC）→ REACH(Authorization)
Table2	Reference laws and regulations update in Remarks column	101	Bis(2-methoxyethyl) ether	C	All applications	—	EU REACH	・Remarks : REACH（SVHC）→ REACH(Authorization)
Table2	Reference laws and regulations update in Remarks column	102	Arsenic acid	C	All applications	—	EU REACH	・Remarks : REACH（SVHC）→ REACH(Authorization)
Table2	Reference laws and regulations update in Remarks column	105	2,2'-dichloro-4,4'-methylenedianiline［MOCA］	C	All applications	—	EU REACH	・Remarks : REACH（SVHC）→ REACH(Authorization)
Table2	Reference laws and regulations update in Remarks column	118	4,4'-bis(dimethylamino)-4"-(methylamino)trityl alcohol	C	All applications	—	EU REACH	・Remarks : REACH（SVHC）→ REACH(Authorization)
Table2	Reference laws and regulations update in Remarks column	125	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated - covering well-defined substances and UVCB substances, polymers and homologues	C	All applications	—	EU REACH	・Remarks : REACH（SVHC）→ REACH(Authorization)
Table2	Reference laws and regulations update in Remarks column	131	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	C	All applications	—	EU REACH	・Remarks : REACH（SVHC）→ REACH(Authorization)
Table2	Reference laws and regulations update in Remarks column	132	Diisopentylphthalate (DIPP)	C	All applications	—	EU REACH	・Remarks : REACH（SVHC）→ REACH(Authorization)
Table2	Reference laws and regulations update in Remarks column	133	N-pentyl-isopentylphtalate	C	All applications	—	EU REACH	・Remarks : REACH（SVHC）→ REACH(Authorization)
Table2	Reference laws and regulations update in Remarks column	153	1-bromopropane; n-propyl bromide	C	All applications	—	EU REACH	・Remarks : REACH（SVHC）→ REACH(Authorization)
Table2	Reference laws and regulations update in Remarks column	154	Dipentyl phthalate (DPP)	C	All applications	—	EU REACH	・Remarks : REACH（SVHC）→ REACH(Authorization)
Table2	Reference laws and regulations update in Remarks column	155	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]	C	All applications	—	EU REACH	・Remarks : REACH（SVHC）→ REACH(Authorization)
Table2	Reference laws and regulations update in Remarks column	168	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	C	All applications	—	EU REACH	・Remarks : REACH（SVHC）→ REACH(Authorization)
Table2	Reference laws and regulations update in Remarks column	169	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)	C	All applications	—	EU REACH	・Remarks : REACH（SVHC）→ REACH(Authorization)
Table2	Reference laws and regulations update in Remarks column	190	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	C	All applications	—	EU REACH	・Remarks : REACH（SVHC）→ REACH(Authorization)
Table2	Reference laws and regulations update in Remarks column	157	PFOA(Pentadecafluorooctanoic acid)	B	PFOA and its salts	25ppb	EU REACH	・Remarks : REACH（Restriction）→ POPs Regulation
Table5-2	Modification of Breakdown List of Substances	None	Brominated flame retardants	None	None	None	None	Four hexabromocyclododecanes were removed from the list of brominated flame retardants (Moved to new list for "No. 79 Hexabromocyclododecane (HBCDD)").

Revised Table	Category of the amendment	No.	Substance group	Rank	Applications	Threshold value	Reference laws and regulations	Amendment details
Table5-1	Modification of Breakdown List of Substances	None	Organotin compounds other than Bis (tri-n-butyltin) oxide (TBTO), Tributyltins (TBTs) and triphenyltins (TPTs)	None	None	None	None	Changed to list of dibutyltin (DBT) and dioctyltin (DOT) compounds
Table5-2	Modification of Breakdown List of Substances	None	Polychlorinated naphthalenes（Cl>=3）	None	None	None	None	・"Cl>=3" → " one or more chlorine atoms" ・Removal of chlorine number of example substances
Table2 Table5-2	Addition of new Breakdown List of Substances	None	Hexabromocyclododecane (HBCDD)	None	None	None	None	Added new Breakdown List of Substances for No. 79 ・Hexabromocyclododecanes removed from list of "No. 24 Brominated Flame Retardant" are included.
Table2 Table5-3	Addition of new Breakdown List of Substances	None	C9-C14 linear and/or branched perfluorocarboxylic acids (C9-C14 PFCAs), their salts and C9-C14 PFCAs-related substances	None	None	None	None	Added new Breakdown List of Substances for No.246 ・PFCAs (No. 121, 122, 123, 124, 176, 179) and their salts, which were deleted from Table 2, are included.
Table2 Table5-3	Addition of new Breakdown List of Substances	None	Perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS-related compounds	None	None	None	None	Added new Breakdown List of Substances for No.183
Table2 Table5-3	Correction of errors	62	Decachloropentacyclo [5.3.0 2,6.03,9,04,8] decane-5-one(Chlordecone)	B	All applications	—	CSCL	Correction of errors ・Substance group : [5.3.0.02,6.03,9.04,8] → [5.3.0.0(2,6).0(3,9).0(4,8)]
Table2	Correction of errors	54	Dodecachloropentacyclo [5.3.0.02,6.03,9.04,8] decane (also known as Mirex)	B	All applications	—	CSCL	Correction of errors ・Substance group : [5.3.0.02,6.03,9.04,8] →[5.3.0.0(2,6).0(3,9).0(4,8)]
Table2	Correction of errors	25	Chlorinated Flame Retardants (CFR)	C	All applications	—	IEC62474	Correction of errors ・Remarks : "REACH（SVHC)" was deleted
Table2 *10	Correction of errors	None	None	None	None	None	EU REACH	Amendment of *10 sentences
Table2	Correction of errors	22	Polychlorinated naphthalenes（Cl>=3）	B	All applications	—	CSCL	Correction of errors ・Substance group : "Cl>=3" → " one or more chlorine atoms" ・Remarks : "Industrial Safety and Health Law*8" → "*9"
Table2	Correction of errors	204	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ? 0.1% w/w of 4-nonylphenol, branched and linear (4-NP)	C	All applications	—	EU REACH	Correction of errors ・Substance group : "?"→"≥"
Table2	Correction of errors	23	Short chain chlorinated paraffins	B	All applications	—	CSCL	Correction of errors ・Substance group : *6 → *5
Table2	Correction of errors	24	Brominated flame retardants	C	All applications	—	IEC62474	Correction of errors ・Substance group : *7 → *6
Table2	Correction of errors	27	Asbestos	B	All applications	—	Industrial Safety and Health Law	Correction of errors ・Remarks : *9→ *8
Table5-2	Correction of errors	None	2,3-dibromo-2-butene-1,4-diol	None	None	None	None	Correction of errors CAS No. : 3234-2-4 → 3234-02-4
Table2	Deleting duplicate items	166	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	(Deleted)	(Deleted)	(Deleted)	EU REACH CSCL	Deleted due to the same substance as No. 57
Table2	Deleting duplicate items	182	4,4'-isopropylidenediphenol (bisphenol A; BPA)	(Deleted)	(Deleted)	(Deleted)	EU REACH	Deleted due to the same substance as No. 178
Table2	Addition of new Applications	4	Mercury and mercury compounds	C	・Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner) in lamps with improved colour rendering index Ra > 80: P ≤ 105 W: 16 mg may be used per burner	—	EU RoHS Directive	Added exemption 4 (b) of RoHS Directive (4 (b) I ~ III are changed to rank C to B)
Table2	Modification of Applications	4	Mercury and mercury compounds	C	・Mercury in other High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner): ・P≦155W：20mg ・155W＜P≦405W：25mg ・P > 405W：25mg	—	EU RoHS Directive	・Applications : Deleted duplicate items ・Applications : Corrected mercury threshold
Table2	Reference laws and regulations update in Remarks column *with change of a substance group name	57	Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)-	B	All applications	—	EU REACH CSCL	・Remarks : Added "＊9" and "REACH(Authorization)" ・Substance group：Added another name of deleted No. 166 (2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)）
Table2	Change of Substance group name	8	Organotin compounds other than bis(tri-n-butyltin)oxide (TBTO), tributyltins (TBTs) and triphenylti	C	All applications	—	なし	After : Organotin compounds other than bis(tri-n-butyltin)oxide (TBTO), tributyltins (TBTs), **triphenyltin (TPT), dibutyltin (DBT), dioctyltin (DOT) compounds**
Table2	Modification of threshold description	35	Benzene	B	Rubber cement contains benzene (The amount of benzene is more than 5% weight of solvent in the rubber cement) (including diluted solution)	—	Industrial Safety and Health Law	Since "5%" is indicated in the "Applications" column, the threshold value of 50,000 ppm is revised to "-" (the threshold value itself is not changed).