

MinebeaMitsumi Group Green Procurement Standard

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MinebeaMitsumi Inc.

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Forms of Documents required for Submission

- Form 1. Certificate of Non-Use of prohibited Substance (F-0045)
- Form 2. Survey Report of Chemical Substance in Products (F-0071)
- Form 3. Component Sheet
- Form 4. Report of Analysis Results (F-0054)
- Form 5. SVHC survey form for REACH regulation (F-0077)

1. Objective

This Standard aims to specify “prohibited substances”, “information communication”, “request for survey to Supplier” and “operation” for chemical substances contained in raw materials, parts, components, packing/package materials and indirect materials that MinebeaMitsumi Group procures, and to comply with legal regulations, customer requirements and industrial standards.

2. Scope of Application

This Standard shall apply to parts, materials and others that MinebeaMitsumi Group procures.

- (1) Raw materials (e.g. steel, plastic pellet) and goods processed using such raw materials.
- (2) Parts, components (e.g. electric and electronic parts, mechanical parts, semiconductor devices, printed circuit boards)
- (3) Packing/package materials (refer to requirements in the 3-8 chapter regarding Packing/package materials used by Supplier to transport/protect parts and materials when they are delivered to MinebeaMitsumi Group.)
- (4) Accessories, service parts and instruction manuals
- (5) Indirect materials (e.g. adhesive tapes, soldering materials, adhesives, paints, varnishes, anti-rust oil, grease, impregnated oil)
- (6) Products specified by MinebeaMitsumi Group other than those above

3. Requirements for Chemical Substances Management

3-1.

MinebeaMitsumi Group’s green procurement activities shall control chemical substances contained in parts and materials according to this Standard.

With regard to implementation, in principle, Supplier and MinebeaMitsumi Group shall conclude Basic Transaction Agreement (and supplemental agreements if necessary) and exchange a purchase specification (or at least specification document equivalent to it).

MinebeaMitsumi Group’s suppliers shall comply with this Standard.

3-2.

This Standard is prepared based on domestic and international related laws and regulations, customer requirements and industry standards, but it is not exhaustive. Therefore, MinebeaMitsumi may ask Supplier to comply with chemical regulations not specified in this Standard, and regulation value that is stricter than what is specified in this Standard by domestic and international legal regulations, customer requirements and others.

3-3. The Management of Chemical Substances in Products

Basically, the parts and others delivered to MinebeaMitsumi Group shall be properly manufactured under management of chemical substances in products. MinebeaMitsumi Group asks Supplier to establish and operate management system for chemical substances in products. Following managements are recommended to establish and operate:

- 1) Management System for Chemical Substance in Products (JIS Z 7201: Management of chemical substances in products - Principles and guidelines)
- 2) Quality Management System (ISO 9001 etc.)
- 3) Environment Management System (ISO 14001)

MinebeaMitsumi Group shall audit its Supplier (paper audit or site audit) as necessary, to confirm Supplier’s implementation status of management of chemical substances in products. These are audited based on ‘Guidelines for the management of chemical substances in products’ and its check sheet which JAMP offered and which was prepared in reference to ‘JIS Z 7201: Management of chemical substances in products-Principles and guidelines’.

3-4. Avoiding Contamination

Take appropriate measures to prevent contamination by mixture, contact or others throughout the production processes of parts and materials (e.g. reactions, synthesis, joining, mixing, molding, and assembly). Likewise, take necessary measures to prevent the contamination from molds, tools, machinery and equipment as well as indirect materials.

In principle, Supplier must not manufacture products and/or materials which contain prohibited chemical substances and those which do not contain them in the same building. If Supplier has difficulty in this matter, MinebeaMitsumi Group will discuss the matter. In particular, for phthalates, there are concerns about migration due to contact, so suppliers must ensure that phthalates do not migrate from equipment and tools used in the production and storage processes, and packaging and package materials that come into contact with products.

3-5. Prohibit on the Use of Recycled Plastics

Supplier is prohibited from supplying MinebeaMitsumi Group with parts and materials that plastic materials sold as recycled materials are used partially or entirely. However, using regrind (see note) generated in Supplier's production processes is permitted to the extent that it does not exceed the limit specified by the UL standard or MinebeaMitsumi Group. If supplier uses regrind materials in accordance with the UL standard, inform MinebeaMitsumi Group to that effect before starting production. Supplier shall control granulating and grinding equipment, and materials appropriately not to being mixed and contaminated.

Note: Regrind materials are ground or granulated plastic waste materials such as runners, sprues and non-contaminated rejected parts that are produced in Supplier's production processes to be recycled.

3-6. Control of Changes

Changes shall be controlled by MinebeaMitsumi Group's operation rule of quality management, but the documents required for reporting changes vary depending on the types of change related to chemical substances in products. Therefore, Supplier shall contact MinebeaMitsumi Group's purchasing department and receive approval before changing something (e.g. 4M). Regarding management of chemical substances in products, it is mandatory that Supplier receives approval by MinebeaMitsumi, when Supplier changes its Supplier, materials (including indirect materials), manufacturing subcontractor, production factories, and country of production.

3-7. Occurrence of Abnormalities or Non-conformance

- (1) In the event that any abnormality or non-conformance occurs with regard to the control of chemical substances in products at Supplier or Supplier's supplier (including minor cases), immediately contact the MinebeaMitsumi department that has placed an order with Supplier.
- (2) In the event that any abnormality or non-conformance occurs with regard to the control of chemical substances in products during incoming inspection at MinebeaMitsumi Group or its customer (including minor cases), provide data and information to MinebeaMitsumi Group to investigate and verify and, if necessary, take all necessary corrective measures from investigation of the causes to prevention of reoccurrence.

3-8. Packing/packaging material used for delivering Supplier's products to MinebeaMitsumi Group

Regarding packing and packaging material used for delivering Supplier's products to MinebeaMitsumi Group, Supplier need not submit Non-Use Certificate and others individually, but MinebeaMitsumi Group may ask Supplier to submit analysis data and other necessary information as necessary.

Supplier shall comply with the following items to smoothly recycle packing and packaging material and to smoothly dispose of waste and to avoid contamination of phthalates in delivered products within MinebeaMitsumi Group:

- (1) Heavy metals as cadmium, lead, hexavalent chromium and mercury shall be less than 100 ppm in total.
- (2) The content of phthalates (DEHP, DBP, BBP, DIBP) is prohibited for less than 1000 ppm in total.
- (3) Using plastic tapes, staples, foam polystyrene, and PVC packaging/packing materials may be restricted.

4. Definition of Terms

4-1. Inclusion

Chemical substances remain on products, parts and others by addition, filling, mixture and adhesion. It does not matter whether chemical substances are included intentionally or unintentionally.

4-2. Impurities

Chemical substances that are contained in natural materials and cannot technically be removed by the refining process of the material for industrial use, or chemical substances that are generated in refining or synthesis processes and cannot technically be removed.

4-3. Intentionally added

A situation where chemical substances are added on products, parts and others in order to provide a specific characteristic, appearance, property and quality. However, only if the chemical substances remain in products, parts, and others, "intentionally added" makes sense. "Impurities" is not treated as "Intentionally added".

4-4. MinebeaMitsumi Group regulation value

Limit values which MinebeaMitsumi Group sets to meet requirements of domestic and international related laws and regulations, our customers, and industry standards.

4-5. 4M Changes

Change(s) made on Man, Machine, Material or Method in the condition of the manufacturing process.

4-6. Region / Homogeneous material

A material that is made up of uniform composition and cannot be mechanically disassembled into different materials such as unscrewing, cutting, crushing, grinding and abrasive processes.

Examples of homogeneous materials: plastics, ceramics, glass, metals, alloys, paper, board, resins, plating, and coatings.

4-7. Certificate of Non-Use of prohibited Substance

A document that certifies that Supplier does not intentionally add prohibited substances and that the concentration levels of chemical substances do not exceed MinebeaMitsumi Group regulation value.

4-8. Report of Analysis Results

A document that clarifies the region on which analysis was performed in analysis data by relating with structure drawings and charts of material composition.

4-9. Analysis data

A report of analysis data issued by an analysis laboratory.

4-10. ISO/IEC 17025 certified body

An analysis laboratory that is certified to meet "ISO/IEC 17025 general requirements for the competence of testing and calibration laboratories" by a third party certification body.

4-11. IEC 62321

A standard for "Determination of certain substances in electrotechnical products" that IEC (International Electrotechnical Commission) sets.

4-12. REACH Regulation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization and Restriction of Chemicals.

4-13. SVHC (Substances of Very High Concern)

Chemical substances identified through the procedure specified in Article 59 of the REACH Regulation as well as those that meet the criteria specified in Article 57 of the REACH Regulation.

4-14. JAMP

The Joint Article Management Promotion-consortium.

4-15. JAMP Guidelines for the management of chemical substances in products

Guidelines for the management of chemical substances in products (including their checklist) JAMP publishes. The Guidelines are drawn up according as Japan Industrial Standards "JIS Z 7201: Management of chemical substances in products - Principles and guidelines".

4-16. JAMP chemSHERPA AI

A Data sheet JAMP provides to communicate and disclose information on chemical substances in articles. Information such as "name of law/regulation", "whether declarable substances are included or not", "name of declarable substances", "CAS Number of declarable substances", "concentration of declarable substances" is put in it. It is used within supply chain.

4-17. JAMP chemSHERPA CI

A Data sheet JAMP provides to communicate and disclose information on chemical substances contained in chemical product and mixture. Information such as "name of law/regulation", "whether declarable substances are included or not", "name of declarable substances", "CAS Number of declarable substances", "concentration of declarable substances" is put in it. It may be used together with SDS.

4-18. Article

An item of specific shape, appearance or design created during manufacture which substantially determines functions in final use rather than functions provided by its chemical composition. Plastic molded, outer parts of metal, sheath of wire, printed circuit board, electronic parts, etc.

4-19. Chemicals

Chemical substance or mixture. Examples are paints, inks, alloy ingot, solder, resin, pellets, etc.

4-20. CAS RN (CAS Registry Number)

Unique numerical identifiers for chemical substances assigned by the Chemical Abstracts Service (CAS) for its chemical substance registry system. It is called CAS No. or CAS number.

4-21. SDS

Safety Data Sheet. It was called MSDS before.

4-22. Mill test report

A document certifying the properties of steel materials.

4-23. GADSL (Global Automotive Declarable Substance List)

A list of controlled chemicals agreed to by the manufacturers of vehicles, parts and chemicals in Japan, USA, and Europe, used when declaring IMDS.

4-24. IMDS (International Material Data System)

A global automobile industry standard system to collect information on materials and substances contained in parts that compose an automobile via the internet.

4-25. CAMDS (China Automotive Material Data System)

China's automobile material management standard system to collect information on materials and substances contained in parts that compose an automobile via the internet.

5. Materials Requested to be Submitted

MinebeaMitsumi Group asks Supplier to submit the materials listed below when selecting and inspecting parts, materials, indirect materials and packing/packing materials to be newly purchased by the related Business Unit or Overseas Factory of the MinebeaMitsumi Group. MinebeaMitsumi Group shall confirm that the products comply with laws/regulations and fulfill customer requirements based on the various reports, certificates, and other data submitted by the supplier.

5-1. Certificate of Non-Use of prohibited Substance (MinebeaMitsumi format: F 0045)

Certificate of Non-Use of prohibited Substance (hereinafter called Non-Use Certificate) warrants that Supplier does not use 'prohibited substances' and 'prohibited substances required by customer' and that such substances do not exceed laws and regulations values or MinebeaMitsumi Group regulation value. Complete and submit Non-Use Certificate List, when reporting on multiple parts and materials.

5-2. Analysis data

Submit analysis data of each homogeneous material of all parts for the 10 prohibited substances by the EU RoHS Directive.

In case that Supplier has difficulty in frequency of submission, specified analysis methods, and specified analysis laboratories described below, contact the MinebeaMitsumi Group department that has placed an order with Supplier. MinebeaMitsumi Group will discuss the matter.

Table 1: Applicable Regions and Analysis Items for Analysis Report for Each Homogeneous Material

(√: applicable, -: exempt)

Analysis Items Applicable regions of parts and materials	Cd	Pb	Cr ⁶⁺	Hg	PBB	PBDE	Phthalat e
Plastic resin (including rubber), ink, pigments, dyes, paints, grease, oil, adhesives etc.	√	√	√	√	√	√	√
Metals, metal alloys, plating, ceramics, glass etc.	√	√	√	√	-	-	-

Notice:

- (1) The effective period of Analysis data is one year from the date of measurement. MinebeaMitsumi Group asks Supplier to provide annual updates.

- (2) Language of analysis data
Analysis Data shall be written in English or Japanese. However, when submitting analysis data in Japanese, Supplier may be asked to provide a separate English translation.

- (3) Items that must be entered in analysis data
Enter the following items in the analysis data:
 - 1) Sample name (to be defined so that it can be related with the submitted data for each homogeneous material)
 - 2) Pretreatment method: official method name, or name of the method if different from the official method
 - 3) Measurement method: measurement method name or official method name
 - 4) Name of analysis laboratory, corporate seal
 - 5) Names and signatures of a responsible person and a person who measured at the analysis laboratory
 - 6) Date of issue, date of measurement
 - 7) Measurement results (if N.D., or not detectable, enter lower limit of quantification)
 - 8) Analysis flowchart: a document that indicates the flow of analysis, such as sampling, pretreatment and measurement operations. Use Report of Analysis Result, Sample Analysis Flow Chart, as a reference when preparing an analysis flowchart.
 - 9) If providing pretreatment of dissolving, note that the sample was completely dissolved (this can be recorded on the analysis flowchart).
 - 10) Picture of sample (The picture must be clear enough to enable identification of the sample and the areas measured.)

- (4) Designation of analysis laboratory and analysis method
Analysis method for substances specified in the EU RoHS Directive must be in compliance with the latest version of IEC 62321 and must be precision analysis method described below. Ask the ISO/IEC17025 certified laboratory to analyze substances by this method described below. In some cases, it may be requested to submit analytical data of a third-party analysis laboratory certified by ISO/IEC17025. In addition, Analysis methods other than IEC62321 may be specified, so please correspond.

An analysis laboratory or method may be designated in order to meet our customer's requirements. MinebeaMitsumi Group will request individually as needed.
Screening analysis by XRF is not permitted as analysis data for submission.
In case of adhesives, paints, ink and others, report the results of analysis under dry condition (condition that they are in MinebeaMitsumi Group's product).

<Precision analysis method>
 - 1) Cadmium (Cd), Lead (Pb), and Mercury (Hg): ICP-AES, ICP-MS, or AAS
 - 2) Hexavalent chrome: UV-Vis (Ultraviolet-visible spectroscopy)
 - 3) PBB, and PBDE: GC/MS (Gas Chromatography Mass Spectrometry)
 - 4) Phthalate: GC/MS (Gas Chromatography Mass Spectrometry)

- (5) Requests for submitting analysis data other than RoHS Directive
If requested by MinebeaMitsumi's customers, Supplier may be asked to submit analysis reports for substances other than RoHS Directive. MinebeaMitsumi Group will request individually as needed.
Example: halogen, antimony, beryllium, etc.

- (6) Tampering with analytical data is prohibited. Please submit the analysis data provided by the analysis laboratory in a state of no modification.

5-3. Report of Analysis Results (MinebeaMitsumi format: F 0054)

Report of Analysis Results is the collating table which relates parts and regions to analysis data. In case that MinebeaMitsumi Group cannot accurately identify the regions of parts with only Report of Analysis Results because the structure is complicated, submit the form of structural drawing and chart of material composition, too. The form of structural drawing and chart of material composition is at Supplier's discretion. The effective period of Report of Analysis Results is one year from the date of measurement in common with analysis data.

5-4. Survey Report of Chemical Substance in Products

(1) chemSHERPA:

MinebeaMitsumi Group designates chemSHERPA as a standard survey sheet format for chemical substances in products.

<Format to be submitted>

Articles : chemSHERPA AI (extension: shai)

Chemicals (Chemical substance or mixture) : chemSHERPA CI (extension: shci)

Note: Confirm how to use the above formats, referring to instruction manuals JAMP publishes.

*JAMP chemSHERPA Official site: <https://chemsherpa.net/english/tool>

(2) Survey Report of Chemical Substance in Products (MinebeaMitsumi format: F 0071) :

This survey format is used when Supplier discloses all of chemical substances in products upon MinebeaMitsumi Group's request. In this case, chemical substances described in this standard are subject to information disclosure. If Supplier could not disclose all of chemical substances in Supplier's products, consult with MinebeaMitsumi Group.

(3) IMDS, CAMDS, JAPIA Standard Material Datasheet:

Regarding automobile-related parts, Supplier may be asked to register chemical data in IMDS , CAMDS, or to submit JAPIA Standard Material Datasheet. MinebeaMitsumi Group will request individually as needed. In this case, please refer to the substances described in this standard and GADSL.

5-5. Other materials

Supplier may be asked to submit materials below, due to requirement from MinebeaMitsumi Group's customer or application of products.

(1) REACH regulation SVHC content Survey Report (MinebeaMitsumi format: F 0077)

(2) SDS

(3) Mill test report (Inspection Certificate)

(4) Component Sheet

If a component is multiple and composed of several kinds of part, prepare and submit a component sheet, relating the SDS, Mill test report, and other report data with the composing region names and data numbers using forms which are provided by Supplier or MinebeaMitsumi.

(5) Other materials required by MinebeaMitsumi Group

5-6. Important reminder for materials to be submitted

(1) Use Excel or Word as the electronic file form for submitting Survey Report of Chemical Substance in Products and Report of Analysis Results.

(2) When submitting copies of the Non-Use Certificate, Non-Use Certificate Lists, Analysis Reports, SDSs or Mill test report, use Adobe Acrobat PDF.

(3) The information that Supplier provide may be disclosed, in whole or in part, in MinebeaMitsumi Group's responses to its customer requests. With regard to any Supplier's trade secret information, contact the MinebeaMitsumi department that has placed an order with Supplier for individual consultation.

(4) Various MinebeaMitsumi Group's business units may request Supplier to survey the same parts and materials. Submit Supplier's data to each individual business unit.

6. Prohibited substances and Declarable substances

MinebeaMitsumi Group defines Prohibited substances and Declarable substances and describes them in this standard. MinebeaMitsumi Group requires Supplier to prohibit the use of certain chemical substances (e.g. cleaning agent, mold release agent, anti-rust oil) in their manufacturing processes even when the products do not contain the chemical substances subject to prohibition. If regulation values for a chemical substance are specified in this Standard, the chemical substance must not be included in excess of the specified values, even if the chemical substances are unintentionally contained in products, such as impurities.

6-1. Prohibited substances

Prohibited substances are prohibited or restricted by relevant domestic and international laws and regulations or international treaties, and they are chemical substances that may be contained in our products.

*Unit of regulation value is ppm unless otherwise specified. Substances shall be controlled under the regulation values.

No.	Chemical substances (groups)	Objects of Regulations(segment)	MinebeaMitsumi Group regulation value (Unit: ppm)	Remarks: Major reference regulations
1	Cadmium and its compounds	<ul style="list-style-type: none"> Resin, resin products, resin material (including rubber, film, etc.) paints, Inks, pigments, dyes, grease, oil, adhesives (The absence of volatile components) 	5	<ul style="list-style-type: none"> RoHS Directive (2011/65/EU) EU REACH Regulation Annex XVII <Exemption> Exempted applications by RoHS Directive
		<ul style="list-style-type: none"> Lead-free solder (bar solder, wire solder, solder with flux, cream solder, solder balls) Solder joints on printing circuit board Solder plating of the part (such as a lead terminal) Tin-based plating of the part (Except the hot dipping) 	20	
		<ul style="list-style-type: none"> Brass, zinc and zinc alloy Aluminum and aluminum alloy Metal plating part of the non-tin-based plating of parts Electroless nickel plating part Thick film paste material, resistor 	75	
		<ul style="list-style-type: none"> All applications other than the above 	75	
		<ul style="list-style-type: none"> Battery 	20 with Battery as a denominator	Battery directive (2006/66/EC)
2	Lead and its compounds	<ul style="list-style-type: none"> Resin, resin products, resin material (including rubber, film, etc.) Paints, inks, pigments, dyes, grease, oil, adhesives (The absence of volatile components) 	100	<ul style="list-style-type: none"> RoHS Directive (2011/65/EU) <Exemption> Exempted applications by RoHS Directive
		<ul style="list-style-type: none"> Lead-free solder (solder bar, a wire-solder, solder with flux, cream solder, solder balls) 	500	
		<ul style="list-style-type: none"> Solder joints on printing circuit board Solder plating on part (lead terminal, including the molten solder plating) Tin-based plating part of the part Metal plating part except the tin-based plating of the part Electroless nickel plating part 	1,000	
		<ul style="list-style-type: none"> All applications other than the above 	1,000	

3	Hexavalent chromium compounds	All uses	1,000	<ul style="list-style-type: none"> RoHS Directive (2011/65/EU) <Exemption> Exempted applications by RoHS Directive
4	Mercury and its compounds	All uses for not batteries	Intentionally added or 1,000	<ul style="list-style-type: none"> RoHS Directive (2011/65/EU) <Exemption> Exempted applications by RoHS Directive
		Battery	5 with Battery as a denominator	Battery directive (2006/66/EC)
5	Polybrominated biphenyls (PBB)	All uses	1,000	<ul style="list-style-type: none"> RoHS Directive (2011/65/EU)
6	Polybrominated diphenyl ethers (PBDE) (Including Deca-BDE: Decabromodiphenyl ether CAS RN 1163-19-5)	Uses for electrical and electronic equipment	Intentionally added or 1,000	<ul style="list-style-type: none"> RoHS Directive (2011/65/EU) USA TSCA
		Uses for not electrical and electronic equipment	Intentionally added or 500	<ul style="list-style-type: none"> EU POPs Regulation Annex I USA TSCA
7	Phthalate esters 4 substances below	Uses for electrical and electronic equipment	Each; 1,000	<ul style="list-style-type: none"> RoHS Directive (2011/65/EU)
	Bis(2-ethylhexyl) phthalate (DEHP) (Another name : DOP) (CAS No. 117-81-7)			
	Dibutyl phthalate (DBP) (CAS No. 84-74-2)			
	Benzyl butyl phthalate (BBP) (CAS No. 85-68-7)			
	Diisobutyl phthalate (DIBP) (CAS No. 84-69-5)	Uses for not electrical and electronic equipment, and for Toys or childcare products	DEHP, DBP, BBP, DIBP Total of 4 substances is less than 1,000	<ul style="list-style-type: none"> EU REACH Regulation Annex XVII
8	Phthalate esters 3 substances below	Toys or childcare products	DINP, DIDP, DNOP Total of 3 substances is less than 1,000	<ul style="list-style-type: none"> Taiwan CNS4797 (Safety standard for toys) American Consumer Product Safety Improvement Act (CPSIA) Japan Toy Safety Standard (ST Standard) EU REACH Regulation Annex XVII
	Diisononyl phthalate (DINP) (CAS No. 28553-12-0) (CAS No. 68515-48-0)			
	Diisodecyl phthalate (DIDP) (CAS No. 26761-40-0)			
	Di-n-octyl phthalate (DNOP) (CAS No. 117-84-0)			
9	Polychlorinated biphenyls (PCB)	All uses	Intentionally added or 50	<ul style="list-style-type: none"> Chemical Substances Control Law EU POPs Regulation Annex I
10	Polychlorinated naphthalenes (PCN) (1 or more chlorine atoms)	All uses	Intentionally added or 50	<ul style="list-style-type: none"> Chemical Substances Control Law EU POPs Regulation Annex I
11	Polychlorinated terphenyls (PCT)	All uses	Intentionally added or 50	<ul style="list-style-type: none"> Chemical Substances Control Law EU REACH Regulation Annex XVII
12	Asbestos	All uses	Intentionally added	<ul style="list-style-type: none"> Industrial Safety and Health Act Germany Chemicals prohibition ordinance EU REACH Regulation Annex XVII
13	Short-chain chlorinated paraffin (carbon number 10-13) (CAS No. 85535-84-8)	All uses	Intentionally added or 1,000	<ul style="list-style-type: none"> Chemical Substances Control Law EU POPs Regulation Annex I

14	Ozone Depleting Substances * Montreal Protocol on Substances that Deplete the Ozone Layer Appendix A (Group I, II) Appendix B (Group I, II, III) Appendix C (Group I, II, III) Appendix E (Group I)	All uses	Intentionally added	•Act for Protection of the Ozone Layer through Regulation of Designated Substances •EU Regulation ((EC)No.1005/2009)
15	Hydrofluorocarbon (HFC), Perfluoro carbon (PFC), Sulfur hexafluoride(SF6)	All uses	Intentionally added	EU Regulation (EU) No.517/2014
16	Bis (tributyl tin) = oxide (TBTO) (CAS No.56-35-9)	All uses	Intentionally added or 1,000 as Tin atom	•Chemical Substances Control Law •EU REACH Regulation Annex X VII
17	Trisubstituted organotin (Tributyl tin (TBT) compounds, Triphenyl tin (TPT) compounds, etc.)	All uses	Intentionally added or 1,000 as Tin atom	•Chemical Substances Control Law •EU REACH Regulation Annex X VII
18	Dibutyl tin (DBT) compounds	All uses	1,000 as Tin atom	•EU REACH Regulation Annex X VII
19	Diocetyl tin (DOT) compounds	Only subject to the following: •Textile products in contact with human skin •Toys and childcare articles •2 solution at room temperature curing (RTV-2) molding kit	1,000 as Tin atom	•EU REACH Regulation Annex X VII
20	Specified amines compounds and some azo dye and pigment forming specified amines (coloring agent) (*1)	All uses	30	•EU REACH Regulation Annex X VII
21	Formaldehyde; Formalin (CAS No. 50-00-0)	Timber products (e.g. speakers and racks) which are made of fiber boards, particle board, or plywood	0.1 (Chamber method)	•Germany Chemicals prohibition ordinance
22	Nickel and its compounds	Parts that are in contact with human skin for a prolonged time (e.g. earphones, headphones)	0.5µg/cm ² /week Test Standard EN1811 : 2011 +A1 : 2015	•EU REACH Regulation Annex XVII
23	Arsenic and its compounds (including Diarsenic trioxide, Diarsenic pentoxide)	Only use of wood preservatives, antifoam agents or fining agents for the glasses	1,000	•EU REACH Regulation Annex XVII
24	Radioactive substances	All uses	Intentionally added	•Laws Concerning the Prevention from Radiation Hazards due to Radioisotopes and Others
25	Perfluorooctane sulfonates (PFOS) and its salt	All uses	Intentionally added or Article : 1,000 Substances, Mixture : 10	•Chemical Substances Control Law •EU POPs Regulation Annex I
26	Perfluorooctanoic acid (PFOA) and its salts and PFOA-related substances (*2)	All uses for not medical devices	Intentionally added or Perfluorooctanoic acid (PFOA) and its salts in total : 25ppb PFOA-related substances : In total 1000ppb (1ppm)	•Norway Prohibition on Certain Hazardous Substances in Consumer Products •EU POPs Regulation Annex I < Medical device uses will be exempted until 2032 >
27	Long-Chain Perfluoroalkyl Carboxylate (LCPFACs)	Parts with surface coating, and material used to coat articles	Intentionally added	•USA TSCA
28	Specific benzotriazole 2-(2H-1,2,3-Benzotriazol-2-yl)-4,6-di-tert-butylphenol (UV-320) (CAS No.3846-71-7)	All uses	Intentionally added	•Chemical Substances Control Law

29	Cobalt chloride (CAS No.7646-79-9)	All uses		Intentionally added or 1,000	•Chemical Substances Control Law	
30	Beryllium oxide (CAS No.1304-56-9)	All uses		Intentionally added or 1,000	•Industrial Safety and Health Act	
31	Dimethylfumarate (DMF) (CAS No.624-49-7)	All uses		0.1	•EU REACH Regulation Annex XVII	
32	Tris(2-chloroethyl) phosphate (TCEP) (CAS No. 115-96-8)	All uses		1,000	•EU REACH Regulation Annex XIV •State of Vermont Regulation	
33	Tris(1-chloro-2- propyl) phosphate (TCPP) (CAS No.13674-84-5)	Use of flame retardants for resin or textile		1,000	•State of Vermont Regulation	
34	Tris(1,3-dichloro-2-propyl) phosphate (TDCPP) (CAS No.13674-87-8)	Use of flame retardants for resin or textile		1,000	•State of Vermont Regulation	
35	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified	All uses		Intentionally added or 100	•Chemical Substances Control Law •EU REACH Regulation Annex XIV •EU POPs Regulation Annex I	
36	PAHs(8 substances below)	Rubber and plastic parts that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity	Toys	Each substance: 0.5	•EU REACH Regulation AnnexXVII	
	Benzo[a]pyrene (CAS No. 50-32-8)					
	Benzo[e]pyrene (CAS No. 192-97-2)					
	Benz[a]anthracene (CAS No. 56-55-3)					
	Chrysene (CAS No. 218-01-9)			Articles other than toys		Each substance 1
	Benzo[b]fluoranthene (CAS No. 205-99-2)					
	Benzo[j]fluoranthene solution (CAS No.205-82-3)					
	Benzo[k]fluoranthene (CAS No. 207-08-9)					
Dibenz[a,h]anthracen (CAS No. 53-70-3)						
37	Halogenated diphenylmethane (*3)	All uses		Intentionally added	•EU REACH Regulation AnnexXVII	
38	Benzene (CAS No. 71-43-2)	Toys or products for children		5	•EU REACH Regulation AnnexXVII	
		Substances or mixture		1,000		
39	Tris(1-aziridinyl)phosphine oxide (TAPO) (CAS No. 545-55-1)	Textile products in contact with human skin directly		Intentionally added	•EU REACH Regulation AnnexXVII	
40	Tris(2,3-dibromopropyl) phosphate (TBPP) (CAS No. 126-72-7)	Textile products in contact with human skin directly		Intentionally added	•EU REACH Regulation AnnexXVII	
41	Perchlorates	All uses		0.006 of parts	•State of California Perchlorate Contamination Prevention Act	
42	2,4,6-Tri-tert-butylphenol (CAS No. 732-26-3)	All uses		Intentionally added	•Chemical Substances Control Law •USA TSCA	

43	Hg, Cd, Cr(VI), Pb, Phthalate esters 4 substances (DEHP, DBP, BBP, DIBP)	Packing/Packaging material	Hg, Cd, Cr(VI), Pb in total ; 100 Phthalate esters in total ; 1,000	•EU Regulation (94/62/EC) •EU REACH Regulation AnnexXVII
44	Pentachlorothiophenol (PCTP) (CAS RN 133-49-3)	All uses	1%	•USA TSCA
45	Hexachlorobutadiene (HCBD) (CAS RN 87-68-3)	All uses	Intentionally added	•USA TSCA
46	Phenol, isopropylated phosphate (PIP(3:1)) (CAS RN 68937-41-7)	All uses	Intentionally added	•USA TSCA •Exemption : lubricants, greases •Adhesives & sealants are prohibited after January 6, 2025
47	Perfluorohexane sulfonates (PFHxS) and its salts and PFHxS-related substances	All uses	Intentionally added	•Stockholm Convention on Persistent Organic Pollutants (POPs)
48	Methylene Chloride (CAS RN 75-09-2)	All uses	Intentionally added	•USA TSCA
49	1-Bromopropane (CAS RN 106-94-5)	All uses	Intentionally added	•USA TSCA
50	Carbon Tetrachloride (CAS RN 56-23-5)	All uses	Intentionally added	•USA TSCA "Already prohibited in prohibited substances No.14"
51	1,4-dioxane (CAS RN 123-91-1)	All uses	Intentionally added	•USA TSCA
52	N-Methylpyrrolidone (NMP) (CAS RN 872-50-4)	All uses	Intentionally added	•USA TSCA
53	Perchloroethylene (CAS RN 127-18-4)	All uses	Intentionally added	•USA TSCA
54	Pigment Violet 29 (CAS RN 81-33-4)	All uses	Intentionally added	•USA TSCA
55	Trichloroethylene (TCE) (CAS RN 79-01-6)	All uses	Intentionally added	•USA TSCA
56	China VOC Regulated Substances	Vehicle paints, industrial protective paints, adhesives, inks, and cleaning agents must comply with China National Standard (GB Standard) below. GB 24409-2020, GB 30981-2020, GB 33372-2020, GB 38507-2020, GB 38508-2020 * Refer to GB standard for details The objects are the above chemicals to be delivered to the MinebeaMitsumi Group's factories in China.. * Each product that is manufactured using the above chemicals and becomes dry and part of the parts is not object.		China National Standards (GB standards)

(*1) Specified amines compounds

No.	Chemical substances	CAS RN
1	4-aminoazobenzene	60-09-3
2	o-anisidine	90-04-0
3	2-naphthylamine	91-59-8
4	3,3'-dichlorobenzidine	91-94-1
5	4-aminodiphenyl	92-67-1
6	Benzidine	92-87-5
7	o-toluidine	95-53-4
8	4-chloro-o-toluidine	95-69-2
9	2,4-toluenediamine	95-80-7
10	o-aminoazotoluene	97-56-3
11	5-nitro-o-toluidine	99-55-8
12	4,4'-methylene-bis-(2-chloroaniline)	101-14-4
13	4,4'-diaminodiphenylmethane	101-77-9
14	4,4'-oxydianiline	101-80-4
15	p-chloroaniline	106-47-8
16	3,3'-dimethoxybenzidine	119-90-4
17	3,3'-dimethylbenzidine	119-93-7
18	p-cresidine	120-71-8
19	2,4,5-trimethylaniline	137-17-7
20	4,4'-thiodianiline	139-65-1
21	2,4-diaminoanisole	615-05-4
22	3,3'-dimethyl-4,4'-diaminodiphenylmethane	838-88-0

(*2) PFOA-related substances

All related substances including salts and polymers with linear or branched perfluoroheptyl (C7F15-) or perfluorooctyl (C8F17-) groups directly bonded to another carbon molecule.

(*3) Halogenated diphenylmethane

No.	Chemical substances	CAS RN
1	Monomethyl-tetrachloro-diphenyl methane (Ugilec 141)	76253-60-6
2	Monomethyl-dichloro-diphenyl methane (Ugilec 121, Ugilec 21)	81161-70-8
3	Monomethyl-dibromo-diphenyl methane (DBBT)	99688-47-8

6-2. Substances scheduled to be prohibited

Chemical substances that have an expiration date by relevant law, regulation and international treaties and agreements. They must not be contained in products greater than threshold after an expiration date and are treated as prohibited substances from the date. And Supplier may be prohibited from using these substances before an expiration date if MinebeaMitsumi Group's customer requires. MinebeaMitsumi Group's relevant business unit will request as needed.

Currently, there is no substance of Substances scheduled to be prohibited.

6-3. Prohibited substances required by customer

Chemical substances that are prohibited from being used in certain products by certain customers' requirements or industry standards. Warrant that the regulation values are met, in case that Certificate of Non-Use of prohibited Chemical Substances and other request form describe that using these chemical substances is prohibited.

*Unit of regulation value is ppm unless otherwise specified. Substances shall be controlled under the regulation values.

No.	Chemical substances (groups)	Objects of Regulations	MinebeaMitsumi Group regulation value (Unit; ppm)		Remarks:
1	Natural rubber	All uses	Intentionally added		
2	Phthalates (*1)	All uses	In total; 1,000		
3	Bromine (including Brominated flame retardants (BFRs))	All uses	900	Br + Cl; 1,500	Due to request for halogen-free
4	Chlorine (including Chlorinated flame retardants(CFRs))	All uses	900		Due to request for halogen-free
5	Antimony and its compounds (including Diantimony trioxide)	All uses	1,000		
6	TBBP-A (CAS No. 79-94-7)	All uses	1,000		
7	Beryllium and its compounds	All uses	Intentionally added or 1,000		
8	PVC ; Polyvinyl chloride and its mixtures (Including copolymers) (CAS No. 9002-86-2, and others)	All uses	Intentionally added		
9	Organotin (*2)	All uses	In total; 1,000		
10	Arsenic and its compounds	All uses Exemption; dopant used for manufacturing semiconductor devices	Intentionally added		
11	Bisphenol A (CAS No. 80-05-7)	Polycarbonate	250		Notice: Each business unit may ask a threshold different from the value described in the left column.
		Resin except Polycarbonate	50		
		Other than the above	Intentionally added		
12	Chlorinated Paraffin (medium-chain/long-chain)	All uses	1,000		
13	Trichlorobenzene (CAS No. 120-82-1, 87-61-6, 108-70-3)	All uses	1,000		
14	Cyclohexane (CAS No.110-82-7)	Only use of adhesive	1,000		
15	Low molecular siloxane, and silicone rubber, silicone resin, silicone grease, silicone oil containing Low molecular siloxane	All uses	Intentionally added		Non-conformance for Quality control
16	Sulfur	All uses	Intentionally added		Non-conformance for Quality control
17	Red phosphorus (CAS No. 7723-14-0)	Flame retardant for resin	Intentionally added		Non-conformance for Quality control
18	Nonylphenol and nonylphenol ethoxylate	All uses	Intentionally added		
19	N-Phenyl-benzenamine reaction products with styrene and 2,4,4-trimethylpentene (BNST) (CAS No.68921-45-9)	All uses except rubber material; however, rubber material for tires is covered	Intentionally added		

20	PFCAs (C9-C14), their salts and related substances	All uses	25 ppb : for the sum of C9-C14 PFCAs and their salts 260 ppb : for the sum of C9-C14 PFCA-related substances	
21	PFHxS (Perfluorohexanesulphonic acid) , its salts and related substances	All uses	25 ppb : for the sum of PFHxS and its salts 1000 ppb : for the sum of PFHxS related substances	
22	The derivatives of PFOS	Substance and Mixture	10	
		Article	1,000	
23	n-Hexane (CAS RN 110-54-3)	All uses	1,000	
24	PAHs 27substances (*3)	Inks, External materials	0.5 ppm individually and 10 ppm for sum of total	
25	Decabromodiphenylethane (DBDPE) (CAS RN 84852-53-9)	All uses	Intentionally added	
26	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) and anti- and syn-isomers (CAS RN 13560-89-9, 135821-03-3, 135821-74-8)	All uses	Intentionally added	

(*1) Phthalates

No.	Chemical substances	CAS RN.
1	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkylesters, C7-rich (DIHP)	71888-89-6
2	1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters ; 1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with $\geq 0.3\%$ of dihexyl phthalate	68515-51-5 68648-93-1
3	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkylesters (DHNUP)	68515-42-4
4	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear (DPP)	84777-06-0
5	Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8
6	Diethyl phthalate (DEP)	84-66-2
7	Diisodecyl phthalate (DIDP)	26761-40-0 68515-49-1
8	Diisononyl phthalate (DINP)	28553-12-0 68515-48-0
9	Diisopentyl phthalate (DIPP)	605-50-5
10	Dimethyl phthalate (DMP)	131-11-3
11	Di-n-hexyl phthalate (DnHP)	84-75-3
12	Di-n-octyl phthalate (DNOP)	117-84-0
13	Di-n-pentyl phthalate (DnPP)	131-18-0
14	n-pentyl-isopentyl phthalate (nPIPP)	776297-69-9

(*2) Organotin

No.	Chemical substances	CAS RN.
1	Monobutyltin (MBT) compounds	multiple
2	Monooctyltin (MOT) compounds	multiple
3	Dibutyltin (DBT) compounds	multiple
4	Dioctyltin (DOT) compounds	multiple
5	Tetrabutyltin (TeBT) compounds	multiple
6	Tetraoctyltin (TeOT) compounds	multiple
7	Tributyltin (TBT) compounds	multiple
8	Tricyclohexyltin (TCyT) compounds	multiple
9	Triphenyltin (TPhT) compounds	multiple

(*3) PAHs

No.	Chemical substances	CAS RN
1	Acenaphthene	83-32-9
2	Acenaphthylene	208-96-8
3	Anthracene	120-12-7
4	Benzo(a)anthracene	56-55-3, 1718-53-2
5	Benzo(a)phenanthrene (chrysene)	218-01-9
6	Benzo(a)pyrene	50-32-8
7	Benzo(b)fluoranthene	205-99-2
8	Benzo(e)pyrene	192-97-2
9	Benzo(g,h,i)perylene	191-24-2
10	Benzo(j)fluoranthene	205-82-3
11	Benzo(k)fluoranthene	207-08-9
12	Benzo(j,k)fluorene (Fluoranthene)	206-44-0, 93951-69-0
13	Benzo(r,s,t)pentaphene	189-55-9
14	Dibenz(a,h)acridine	226-36-8
15	Dibenz(a,j)acridine	224-42-0
16	Dibenzo(a,h)anthracene	53-70-3
17	Dibenzo(a,e)fluoranthene	5385-75-1
18	Dibenzo(a,e)pyrene	192-65-4
19	Dibenzo(a,h)pyrene	189-64-0
20	Dibenzo(a,l)pyrene	191-30-0
21	7H-Dibenzo(c,g)carbazole	194-59-2
22	Fluorene	86-73-7
23	Indeno(1,2,3-cd)pyrene	193-39-5
24	5-Methylchrysene	3697-24-3
25	Naphthalene	91-20-3
26	Phenanthrene	85-01-8
27	Pyrene	129-00-0, 1718-52-1

6-4. Declarable substances

Substances that are required to communicate information by regulations and/or industry standards, and to collect and provide information by Supplier and through supply chain.

Notice: Using the Survey Report of Chemical Substance in Products (chemSHERPA or MinebeaMitsumi format F-0071) or REACH regulation SVHC content Survey Report (MinebeaMitsumi format: F 0077), provide MinebeaMitsumi Group with information about SVHC set forth in REACH Regulation in accordance with the following procedure.

(1) New SVHCs are added to the candidate list by European Chemicals Agency (ECHA), as needed. Supplier shall obtain the latest candidate list of SVHC on the ECHA official website below and control them.

<http://echa.europa.eu/web/guest/candidate-list-table>

(2) When SVHCs are newly added to the candidate list from now on, the SVHCs are subject to Declarable Substances at the time. Therefore, Supplier shall establish a system to provide information about SVHC immediately, when SVHCs are newly added to the candidate list.

*Unit of regulation value is ppm unless otherwise specified. Substances shall be controlled under the regulation values.

No.	Chemical substances (groups)	CAS RN.	Objects of Regulations	Regulation value (Units; ppm)	Remarks: Major reference regulations
1	REACH Regulation Substances of Very High Concern (SVHC) (*1)	—	All uses	-	EU REACH Regulation
2	Substituted diphenylamine (*2)	—	All uses	Intentionally added	Canadian Environmental Protection Act
3	Ethanol, 2-((2-aminoethyl)amino)-	111-41-1	All uses	Intentionally added	Canadian Environmental Protection Act

(*1) When SVHC is described in 'Prohibited Substances', 'Prohibited substances required by customer' and 'Substances scheduled to be prohibited', that substance is subject to controlled substances in the relevant category. However, an object of regulations and controlled values differ, depending on the relevant category.

(*2) Substituted diphenylamine

No.	Chemical substances	CAS RN.
1	Benzenamine, 4-octyl-N-(4-octylphenyl)-	101-67-7
2	Benzenamine, 4-octyl-N-phenyl-	4175-37-5
3	Benzenamine,4-(1-methyl-1-phenylethyl)-N-(4-(1-methyl-1-phenylethyl)phenyl)-	10081-67-1
4	Benzenamine, 4-(1,1,1,3,3-tetramethylbutyl)-N-[4-(1,1,1,3,3-tetramethylbutyl)phenyl]-	15721-78-5
5	Benzenamine, 4-nonyl-N-(4-nonylphenyl)-	24925-59-5
6	Benzenamine, ar-octyl-N-(octylphenyl)-	26603-23-6
7	Benzenamine, ar-octyl-N-phenyl-	27177-41-9
8	Benzenamine, ar-octyl-N-(nonylphenyl)-	36878-20-3
9	Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1
10	Benzenamine, N-phenyl-, styrenated	68442-68-2
11	Benzenamine, 2-ethyl-N-(2-ethylphenyl)-, (tripropenyl) derivatives	68608-77-5
12	Benzenamine, N-phenyl-, (tripropenyl) derivatives	68608-79-7
13	Benzenamine, N-phenyl-, reaction products with isobutylene and 2,4,4-trimethylpentene	184378-08-3

7. Obtaining up-to-date information

Latest materials such as this Standard, documents and formats regarding MinebeaMitsumi Green Procurement are put on the MinebeaMitsumi website. Download the latest materials on the website.

URL: <http://www.minebeamitsumi.com/english/corp/company/procurements/green/index.html>

Revision history

Revision	Revised date	Revised contents
The 6th	February. 01, 2018	Completely revised Not changed: forms for Supplier to submit
The 7th	July.16, 2021	Completely revised MinebeaMitsumi Group Green Procurement Standard EM10507 Attachment Environmental Chemical Substances List was abolished and integrated into this standard.