



Minebea Group Green Procurement Standard

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Minebea Co., Ltd.

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Preface

01. Positioning of the Standard

As a part of the product chemical substances management performed by the Minebea Group (Minebea), the Minebea Group Green Procurement Standard (Standard) is issued to ensure that no prohibited chemical substances are used in Minebea products. The Standard specifies chemical substances that must not be present in purchased parts and materials, those that must not be used in manufacturing processes so as to avoid contamination of parts and materials, and those that are subject to data sharing, as well as the procedures for managing these substances. Every effort shall be made to share this Standard throughout the Minebea organization and with all its suppliers.

02. Basic Policy

This Standard identifies and stipulates controls for specific chemical substances that have been selected in light of various countries' laws and regulations restricting or prohibiting the use of chemical substances in products. Please note that this Standard does not encompass all regulatory controls for chemical substances that are currently in effect throughout the world. To simplify the list of prohibited chemical substances, any chemical substance that is not or not likely to be contained in our products is indicated in this Standard only by the name of the law or regulatory standard that controls such substances. Please note that there are other chemical substances that are prohibited or restricted by laws and regulations in addition to those listed in this Standard.

We recommend using the JAMP MSDSplus and JAMP AIS, listing all chemical substances specified by the Joint Article Management Promotion-consortium (JAMP), in order to eliminate the need for reinvestigating materials every time a revision or addition is made to a law or regulation.

- (1) Management of chemical substances contained in parts and materials, regulatory compliance of Minebea products, and fulfillment of customer requirements shall be performed using the data provided by suppliers.
- (2) Minebea will make individual requests to suppliers with regard to related regulations, emergency regulations, and Minebea customer requirements not specified in this Standard.
- (3) Minebea may require suppliers to restrict the use of certain chemical substances in their manufacturing processes even when the products do not contain the chemical substances subject to restriction.
- (4) This Standard shall not apply in matters directly related to the lives and safety of people, in cases where no alternative technologies are available, or in cases where problems of reliability will arise, and only when it is specifically instructed by Minebea.
- (5) Minebea does not permit the use, inclusion, or commingling of any prohibited chemical substances in Minebea products. If regulatory limits for a chemical substance are specified in this Standard, the chemical substance must not be used in excess of the specified values. Intentional use, inclusion, or commingling of banned chemical substances is expressly prohibited even when their level of concentration is below regulatory limits.
- (6) Minebea shall set its own regulatory limits for chemical substances that exist naturally in measurable quantities to control the concentration level of impurities with due consideration given to the detection threshold of the measuring devices and margin of error.
- (7) Compliance with the REACH Regulation shall be accomplished via the data sharing system for chemical substances provided by JAMP (see section 3-13).

1. Objective

The purpose of this Standard is to specify chemical substances prohibited in raw materials, parts, components, packing/packaging materials and indirect materials procured by Minebea. It establishes standards and procedures for distributing information about such chemical substances, requires suppliers to conduct investigations into chemical substances used in their products and stipulates proper management of chemical substances in order to ensure compliance with all regulatory as well as customer requirements.

2. Scope of Application

2-1. Parts and Materials

Any articles procured by Minebea, or by third parties to which Minebea contracts production, that is incorporated into, included in, or attached to products.

- Raw materials (e.g. steel, plastic pellets, etc.) and processed goods of raw materials
- Parts, components (e.g. electric and electronic parts, mechanical parts, semiconductor devices, printed circuit boards, etc.)
- Packaging materials (those procured by Minebea and third parties to which Minebea contracts production of its products)
- Accessories, service parts and instruction manuals
- Indirect materials (e.g. adhesive tapes, soldering materials, adhesives, paints, varnishes, marking materials, anti-rust oil, grease, impregnated oil etc.)
- Repair parts (repair parts for shipped products specified by Minebea)
- Customer-specified items purchased by Minebea (may be exempt from this Standard due to contracts with the customer)

2-2. Products

- Products designed, manufactured and sold by Minebea
- Products the design and production of which Minebea contracts to suppliers and sells as Minebea products
- Products of which design and production is contracted to Minebea by customers (excluding articles supplied by such customers)

2-3. Exemption

The following items are exempt from the scope of this Standard.

- Parts and materials specified by Minebea that are used in products directly related to the lives and safety of people in the fields such as aerospace, traffic/transportation, medical applications, etc.
- Chemical substances that are exempt from EU ROHS and ELV Directives, and other regulations. (Those that are not exempt shall be specified in this Standard.)
- Products that are excluded from the scope of this Standard as agreed upon by Minebea customers.
- Chemical substances, preparations, and mixtures specified by Minebea to be used for specific parts or purposes, for which no effective alternative is currently available.
- Parts and materials specified by Minebea that are used for equipment manufactured by and used within Minebea and cannot be replaced with alternative technologies, or items which are required for safety and reliability.
- Packaging/packing materials used by suppliers to transport/protect parts and materials when they are to be delivered to Minebea (see section 8).

3. Definitions

This section includes definitions of terms used in this Standard.

3-1. Inclusion

A substance is considered included if the supplier intentionally adds, fills or attaches such substance to products/parts and materials for the purpose of maintaining the functionality or quality of the product/part and material, regardless of constituents/amount present.

However, impurity element (dopants) used for the production of semiconductor devices shall not be considered as included as long as it is present in very small residual amount, even though it is used intentionally.

3-2. Impurities

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

Impurities must not exceed regulatory limits when such limits are specified in this Standard.

3-3. Legal Limits (Threshold Levels) and Minebea Regulatory Limits

Legal limit: Maximum weight ratio or content of a legally prohibited or restricted chemical substance allowed in parts and materials

Minebea regulatory limit: Maximum weight ratio or content of a chemical substance that should not be exceeded unless such substance is used intentionally. Minebea regulatory limits are specified in this Standard.

3-4. Homogeneous Material

Homogeneous material means a material that cannot be mechanically disjointed into different materials.

The term “homogeneous” means “of uniform composition throughout.”

“Decompose mechanically into different materials” means that a material can be separated by mechanical processes, such as unscrewing, cutting, pulverization, grinding and polishing.

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

Source: European Commission Frequently Asked Question on RoHS WEEE and RoHS Enforcement Guidance Document

3-5. Certificate of Non-Use of Prohibited Chemical Substance

A Certificate of Non-Use of Prohibited Chemical Substance certifies that the supplier does not intentionally use prohibited chemical substances and that the concentration levels of chemical substances do not exceed legal limits and/or Minebea regulatory limits.

3-6. Report of Analysis Results

A Report of Analysis Results enables suppliers to provide the results of analysis as well as information on the part on which the analysis has been performed via chemical structure diagrams and bill of material in the format specified by Minebea.

3-7. Analysis Report

An Analysis Report is a report containing the analysis results issued by an analysis laboratory or a copy of such a report. The information required for an Analysis Report is separately specified.

3-8. ISO/IEC 17025 Certified Body

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

3-9. IEC 62321

IEC: International Electrotechnical Commission

IEC 62321: Electrotechnical products - Determination of levels of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers)

3-10. REACH Regulation

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

3-11. SVHC (Substances of Very High Concern)

Substances of Very High Concern (SVHC) are 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.

3-12. Halogen-free

Parts and materials are halogen-free when concentrations of both chlorine and bromine are less than 0.09 wt% (900 mg/kg), with total chlorine/bromine content being less than 0.15 wt% (1500 mg/kg). Since there are currently no legal regulations that specify standards for halogen-free materials, industry standards are commonly used. Minebea customers may have different halogen-free requirements including halogens subject to control and their threshold limits.

3-13. JAMP

JAMP refers to the Joint Article Management Promotion-consortium.

URL: <http://www.jamp-info.com/>

3-14. List of JAMP Declarable Substances

The list of JAMP declarable substances is a list of legally regulated chemical substances, and substances banned, restricted, or controlled by industry organizations. See the JAMP Web site for details.

3-15. JAMP AIS (Article Information Sheet)

JAMP AIS is a tool developed by JAMP to facilitate data sharing related to chemical substances contained in products. JAMP AIS is designed to provide downstream users with specific data regarding an article such as mass, part, material, and presence of regulated substances, material name, quantity and concentration per article.

3-16. JAMP MSDSplus

MSDSplus is a tool developed by JAMP to facilitate data sharing concerning chemical substances, preparations, and mixtures contained in products. It contains names of relevant laws and regulations, information on the presence of controlled chemical substances as well as names, CAS numbers and concentrations of chemical substances. MSDSplus is used along with the MSDS (material safety data sheet).

3-17. CAS Number

CAS numbers are unique numerical identifiers for chemical substances assigned by the Chemical Abstracts Service (CAS) for its chemical substance registry system.

4. Prohibited Chemical Substances

Prohibited chemical substances are substances that are prohibited from being used or included in parts and materials procured by Minebea. Prohibited chemical substances are categorized into three groups. Threshold limits, scope of control, uses, control methods, and other requirements are specified for chemical substances in each group.

When individual requirements are specified by Minebea customers, suppliers will be notified of the requirements detailed in the Annexes to this Standard via the Special Requirement Form (Form-1). Such requirements may apply to chemical substances that are used in manufacturing processes (e.g. cleaning, mold release, rustproofing agents, etc.) but not contained in parts and materials.

4-1. Group I Prohibited Chemical Substances

Group I prohibited chemical substances are substances banned under EU RoHS and ELV Directives (See Table 1). Group I prohibited chemical substances also include polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE) which are not covered under the ELV Directive but banned under the EU RoHS Directive. Minebea has set its own regulatory limits, which are stricter than the legal limits required by the RoHS and ELV Directives, for cadmium and its compounds as well as lead and its compounds. The values of Minebea regulatory limits vary depending on articles.

Lead in solders for the resoldering of thin copper wires of 100 µm diameter and less in power transformers specified in RoHS exemption No. 33 is not exempt from this Standard.

Table 1: Group I Prohibited Chemical Substances

No.	Substance Name	Minebea Regulatory Limit*1	Restriction
1	Cadmium and its compounds	< 5 mg/kg	Plastic resin (including rubber) Inks, pigments, dyes, paints, grease, oil, adhesives
		< 20 mg/kg	Solder
		< 75 mg/kg	Brass, zinc and zinc alloy Aluminum and aluminum alloy
		< 75 mg/kg	All uses other than the above and the uses excluded
2	Lead and its compounds	< 100 mg/kg	Plastic resin (including wire coating resin), rubber, ink, pigments, dyes, paints, grease, oil, adhesives
		< 500 mg/kg	Lead-free solder (limited to cases where only solder is procured)
		< 1000 mg/kg	All uses other than the above and those exempted (with the exception of exemption 33)
3	Hexavalent chromium compounds	< 1000 mg/kg	All uses other than those exempted
4	Mercury and its compounds	< 1000 mg/kg	All uses other than those exempted
5	Polybrominated biphenyls (PBB)	< 1000 mg/kg	All uses (not controlled under ELV Directive)
6	Polybrominated diphenyl ethers (PBDE)	< 1000 mg/kg	All uses (not controlled under ELV Directive)

*1: mg/kg = ppm

Note: Refer to the Detailed List of Chemical Substances (see section 5-8) or List of JAMP declarable substances for typical compounds.

4-2. Group II Prohibited Chemical Substances

Group II prohibited chemical substances are substances other than Group I prohibited chemical substances that are banned or whose manufacture, import or use is restricted by relevant domestic and overseas laws and regulations, or international treaties and agreements and are often banned or restricted by customers due to their possible inclusion in Minebea products (see Table 2).

The “-” symbol appearing in the legal limit column indicates that intentional use of substances is prohibited.

The restriction column shows uses where chemical substances are prohibited.

Table 2: Group II Prohibited Chemical Substances

№	Substance Name	CAS No.	Legal Limit	Restriction
7	Bis (tributyl tin) = oxide	56-35-9	-	All uses
8	Tributyl tin (TBT)	-	< 0.1 wt%	All uses
	Triphenyl tin (TPT)	-		All uses
	Dibutyl tin (DBT)	-		Compliance deadline for DBT and DOT: January 1, 2012
	Diocetyl tin (DOT)	-		
9	Polychlorinated biphenyls (PCB)	-	-	All uses
10	Polychlorinated naphthalene (PCN) (3 or more chlorine atoms)	-	-	All uses
11	Polychlorinated taphenyl (PCT)	-	< 0.005 wt%	All uses
12	Short-chain chlorinated paraffins (SCCP) (short-chain chlorinated paraffin with a carbon chain length of 10-13)	85535-84-8	-	All uses
13	Asbestos	-	-	All uses
14	Azo pigments and azo dyes*1	-	< 30 mg/kg	Uses in parts that come into contact with the human body
15	Ozone depleting substances (Substances subject to the Montreal Protocol *2)	-	-	All uses
16	Radioactive substances	-	-	All uses
17	Formaldehyde	50-00-0	*3	Timber products
18	Dioxins	-	-	All uses
19	2-(2'-hydroxy-3',5'-di-tert-butylphenyl) benzotriazole	3846-71-7	-	All uses
20	Perfluorooctane sulfonate (PFOS) C8F17SO2X (X=OH, metallic salt (O-M+), halogenide, amide, and derivatives containing other polymers)	-	< 50 mg/kg	Preparations or mixtures
			< 1000 mg/kg	Half-finished goods, articles*4
			< 1 µg/m2	Textiles, coating material
21	Beryllium oxide	1304-56-9	-	All uses
22	Phthalate Esters		Total of 3 < 1000 mg/kg	Toys and childcare articles
	- Bis (2-ethylhexyl) phthalate (DEHP)	117-81-7		
	- Dibutyl phthalate (DBP)	84-74-2		
	- Benzylbutyl phthalate (BBP)	85-68-7		
23	Phthalate Esters		Total of 3 < 1000 mg/kg	Toys and childcare articles that children can put into their mouths
	- Diisononyl phthalate (DINP)	28553-12-0		
	- Diisodecyl phthalate (DIDP)	68515-48-0		
	- Di-n-octyl phthalate (DNOP)	26761-40-0		
		68515-49-1		
		117-84-0		
24	Cobalt chloride	7646-79-9	-	Desiccants and humidity indicators

Table 2: List of Group II Prohibited Chemical Substances (Continued)

25	Nickel	7440-02-0	-	Parts that come into contact with the human body
26	Dimethylfumarate (DMF)	624-49-7	<0.1 mg/kg	All uses
27	Hexachlorobenzene (HCB)	118-74-1	-	All uses
28	2,4,6-tri-tert-butylphenol	732-26-3	-	All uses
29	Mirex	2385-85-5	-	All uses
30	Polyvinyl chloride and its mixtures	9002-86-2 other	-	Packaging/packing materials, and articles required to be halogen-free
31	Cyclohexane	110-82-7	-	All uses Compliance deadline for polychloroprene: December 31, 2010
32	Benzene	71-43-2	< 5 mg/kg ----- < 0.1 wt%	Toys and toy parts ----- Substances and mixtures
33	Arsenic compounds	-	-	Wood preservatives
34	Monomethyl-tetrachloro-diphenyl methane	76253-60-6	-	All uses
35	Monomethyl-dichloro-diphenyl methane Product name: Ugilec 121, Ugilec 21	-	-	All uses
36	Monomethyl-dibromo-diphenyl methane (DBBT) or Bromobenzylbromotoluene (DBBT)	99688-47-8	-	All uses
37	Trichlorobenzene	120-82-1 87-61-6 108-70-3	<0.1 wt%	All uses

*1: Azo pigments and azo dyes: REACH Regulation Annex XVII

Note: Refer to the Detailed List of Chemical Substances (see section 5-8) for typical compounds.

*2: Substances corresponding to the Montreal Protocol on Substances that Deplete the Ozone Layer, Groups I and II in Annex A, Groups I, II and III in Annex B, Groups II and III in Annex C, and those in Annex E.

Note: Refer to the Detailed List of Chemical Substances (see section 5-8) for details.

*3: Legal limit values are the values obtained in the below test methods.

- Chamber method: Concentration in the air: 0.124 mg/m³ (or 0.1 mg/kg) or less in an air-tight test chamber whose volume is 12 m³, 1 m³, or 0.0225 m³
- Perforator method: 6.5 mg or less per 100 g of particleboard without surface treatment (average value over six months)
7.0 mg or less per 100 g of a fiberboard without surface treatment (average value over six months)
8.0 mg or less per 100 g of a particleboard/fiberboard without surface treatment (value from one-time measurement compliant with EN120)
- Desicator method: Average content 0.5 mg/L or less, maximum content 0.7 mg/L or less (average, and maximum values to be confirmed with n=2)

*4: Total calculated for identifiable part of structure or microstructure containing PFOS.

Restrictions and exemptions specified in Annex XVII of the REACH Regulation (restrictions on the manufacture, marketing and use of certain hazardous chemicals substances and preparations) shall apply.

4-3. Group III Prohibited Chemical Substances

Group III prohibited chemical substances are substances other than Group I and Group II prohibited chemical substances that are banned or restricted by relevant domestic and overseas laws and regulations, international treaties, or industry standards although they are deemed very unlikely to be used or included in Minebea products.

Table 3 shows a list of laws, regulations, international treaties, and industry standards for chemical substances. Note that the list does not encompass all laws, regulations, international treaties, and industry standards for chemical substances that are currently in effect throughout the world.

Table 3: Major Laws, Regulations, International Treaties, and Industry Standards for Chemical Substances

	Country	Names of Laws, Regulations, International Treaties, and Industry Standards for Chemical Substances
Laws and regulations	EU	REACH Regulation (Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization and Restriction of Chemicals)
		CLP Regulation: Regulation of the European Parliament and of the Council on classification, labeling and packaging of substances and mixtures
		Batteries Directive (Directive 2006/66/EC of the European Parliament and of the Council on batteries and accumulators and waste batteries and accumulators)
		Packaging Directive (Directive 94/62/EC of the European Parliament and of the Council on packaging and packaging waste)
		Toy Safety Directive/New Toy Safety Directive (2009/48/EC): There is a transitional period.
	USA	Environmental Protection Agency (EPA)
		Green Electronics Council (GEC)
		Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986, State of California) Toxic Substances Control Act (TSCA)
	Canada	Canadian Environmental Protection Act (CEPA) Priority Substances List (PSL)
	China	Provisions on the Environmental Administration of New Chemical Substances Environmental Management Stipulations on the First Import of Chemicals and the Import and Export of Toxic Chemicals Foreign Trade Law of The People's Republic of China Regulations on Safe Management of Hazardous Chemicals / Measures for the Administration of Registration of Hazardous Chemicals
	Korea	Toxic Chemical Control Law Occupational Safety and Health Law
	Thailand	Toxic Substances Control Act and related laws and regulations
	Japan	Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (Chemical Substances Control Law)
Industrial Safety and Health Act		
Poisonous and Deleterious Substances Control Act		
International treaties	-	Montreal Protocol on Substances that Deplete the Ozone Layer
		Stockholm Convention on Persistent Organic Pollutants (POPs)
		The Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (PIC)
Industry standards	-	Global Automotive Declarable Substance List (GADSL)
		Joint Industry Guide (JIG)

4-4. Ban on the Use of Recycled Plastics

Suppliers are prohibited from supplying Minebea with parts and materials made partially or entirely from plastic materials that are sold as recycled materials. However, use of regrind (see note) generated in suppliers' production processes is permitted to the extent that such use of regrind does not exceed the limit specified by the UL standard or Minebea.

Note: Regrind materials are ground or granulated plastic waste materials such as runners, sprues and non-contaminated rejected parts that are produced in-house by the molder to be recycled with virgin materials.

UL 746D limits the use of regrind materials to 25% unless otherwise specified. Materials must meet this requirement in order to be UL approved.

5. Operation

5-1. Basics of Operation Method

- (1) Minebea's green procurement activities shall consist of controlling chemical substances contained in parts and materials according to this Standard.
With regard to implementation, in principle, the supplier and Minebea shall conclude Basic Transaction Agreement (and supplemental agreements if necessary) and exchange a purchase specification (or equal specification document).
- (2) Minebea shall confirm that the products are regulatory compliant and fulfill customer requirements based on the various reports, certificates, and other data submitted by the supplier.
- (3) This Standard was created to fulfill domestic and foreign laws and regulations, as well as customer requirements, but does not necessarily cover all related laws or customer requirements. Consequently, matters not covered by this Standard shall be handled individually as special requirements, and Minebea may ask suppliers to submit reports, certificates and data accordingly.
- (4) Minebea's regulatory limits for Group I prohibited chemical substances specified in this Standard have been set in accordance with the current technology levels and levels required by the majority of its customers. When an even stricter standard is required by Minebea's customers, Minebea will request suppliers to submit reports, certificates and data accordingly.
- (5) Control of chemical substances contained in products should follow JAMP Guidelines for the Management of Chemical Substances in Products. These guidelines are the same as those established by Japan Green Procurement Survey Standardization Initiative (JGPSSI).
JGPSSI Web site URL: <http://home.jeita.or.jp/eps/>

5-2. Obtaining Chemical Substance Data from Upstream Suppliers

To verify and ensure the control of chemical substances contained in products, suppliers are asked to obtain information on chemical substances from upstream suppliers and provide such information to Minebea.

5-3. Control of Changes

Minebea uses quality control procedures and rules to control changes related to chemical substances contained in products. The documents required for reporting changes vary depending on the types of change. Please contact the Minebea department that has placed an order with your company for approval before making any change related to a chemical substance.

5-4. Occurrence of Abnormalities or Noncompliance

- (1) In the event that any abnormality or noncompliance occurs with regard to the control of chemical substances contained in products at your company or your company's supplier (including minor cases), immediately send written notification to the Minebea department that has placed an order with your company.
- (2) In the event that any abnormality or noncompliance occurs with regard to the control of chemical substances contained in products during Minebea's or its customer's receiving inspection (including minor cases), take all necessary corrective measures from investigation of causes to prevention of recurrence.

5-5. Avoiding Contamination

Take appropriate measures to prevent contamination throughout the production processes of parts and materials (e.g. reactions, synthesis, joining, mixing, molding, and assembly) in accordance with the Guidelines for the Management of Chemical Substances in Products. Likewise, take necessary measures for preventing the contamination of molds, tools, machinery and equipment as well as indirect materials.

5-6. Data Sharing

Follow the procedures detailed in section 6 for data sharing.

The information that you provide may be disclosed, in whole or in part, in Minebea's responses to its customer surveys.

With regard to any supplier's proprietary information, please contact the Minebea department in charge of survey for individual consultation.

5-7. Requirements Not Stipulated in This Standard

Depending on the customer's request, Minebea may request separate, individual surveys regarding chemicals not stipulated in this Standard and detailed information.

Minebea may request separate surveys if they become necessary for chemical substances newly regulated due to revisions of/additions to regulations, or if such survey regarding chemical substances is requested by government/administrative agencies.

5-8. Detailed List of Chemical Substances

The Detailed List of Chemical Substances, which lists typical chemical substances by category of banned chemicals, is available on the procurement page of Minebea's Web site.

URL: <https://www.minebea.co.jp/english/procurements/green/index.html>

6. Data Requested for Submission

Information we ask suppliers to submit includes documents for sharing data on chemical substances contained in products, Certificates of Non-Use of Prohibited Chemical Substance, Reports of Analysis Results, Analysis Reports, MSDSs, mill sheets, and component lists, all of which are listed in Table 4. The information required for these documents is explained in sections 6-1 through 6-6.

Minebea's green procurement is based on certifying to our customers, using the related data submitted by suppliers, that the chemical substances contained in our products are being managed.

- (1) Submit the required data to Minebea promptly and by the specified deadline.
- (2) Submit data to Minebea Procurement Division that requested submission of data. Various Minebea business units may request you to perform surveys on the same parts and materials. Please submit your data to each individual business unit.
- (3) Send data in electronic format by e-mail, electronic file, etc.
 - a) Use Excel or Word as the electronic file format for submitting the Environmental Hazardous Substances Survey Report and Report of Analysis Results.
 - b) When submitting copies of the Non-Use Certificates, Non-Use Certificate Lists, Analysis Reports, MSDSs, mill sheets, please use Adobe Acrobat PDF format.
 - c) Contact us beforehand when you send the data by fax or mail.
- (4) As a rule, we ask that you submit data in the formats specified by Minebea; however, we will contact you separately when submission of data in the formats specified by our customers is necessary.
- (5) Other

Please submit data in a way that makes verification simple, for example, to make the relationships between the various documents easy to understand, to add control numbers, to standardize names or to add explanatory text. Submit legible and clear data.

Table 4: Types, Requirements and Formats of Data to Be Submitted

Documents for Sharing Data on Chemical Substances Contained in Products					
Scope	Types of data to be submitted		Relevant sections / Requirements		Format
Chemical substances and mixtures (preparations)	MSDSplus		6-1-1 through 6-1-4		JAMP
	AIS				JAMP
Articles	Environmental Hazardous Substances Survey Report		6-1-5 (When data cannot be submitted by AIS)		To be provided by Minebea dept. placing the order
	Constituent table				Format used by supplier
Data to Be Submitted by Minebea-specified Forms					
Types of data to be submitted	Data to be submitted and requirements by prohibited chemical substance group			Relevant sections / Requirements	Format
	Group I	Group II	Group III		
Certificate of Non-Use of Prohibited Chemical Substance	Required	Required	Required when requested	6-2	Form-2
Non-Use Certificate List	Required when there is a large number of applicable parts and materials				Form-3
Report of Analysis Results	Required	Required when requested		6-3	Form-4
Analysis Report	Required	Required when requested			Format used by analysis laboratory

MSDS	Required for chemical substances and mixtures	6-4	Format used by the issuer
Mill sheets	Required for metals, alloys and other processed goods	6-5	Format used by the issuer
Component List	When attaching multiple pieces of data, such as MSDSs, mill sheets, etc.	6-6	Form-5

6-1. Sharing Data on Chemical Substances Contained in Products

JAMP provides the following data sharing forms.

- (1) MSDSplus: chemical substances and mixtures (preparations)
- (2) AIS: articles

Use these tools available from JAMP free of charge for data sharing.

6-1-1. When Using JAMP Tools

The JAMP tools may not contain the most up-to-date information such as the addition of SVHC due to the timing of revisions. We may ask you to provide additional data on chemical substances whenever it is necessary.

6-1-2. When Sharing Data on Constituents of Parts and Materials via JAMP MSDSplus (See Table 5)

- (1) CAS numbers are required for SVHC (0.1 wt% or higher).
- (2) CAS numbers are required for substances that contain JAMP declarable substances (0.1 wt% or higher).
- (3) CAS numbers should be provided, if known, for SVHC (less than 0.1 wt%) and JAMP declarable substances (less than 0.1 wt%).

6-1-3. When Sharing Data on Constituents of Parts and Materials via JAMP AIS (See Table 5)

When entering constituent data on AIS, make sure that the total percentage of chemical substances contained in each homogeneous material used for a part as well as the total percentage of chemical substances contained in a part comes to 100%.

Note: Although the REACH Regulation specifies using an article as a denominator, use homogeneous material as a denominator as specified in the RoHS Directive when providing information about chemical substances and their CAS numbers.

- (1) CAS numbers are required for SVHC (0.1 wt% or higher).
- (2) CAS numbers are required for substances that contain JAMP declarable substances (0.1 wt% or higher).
- (3) CAS numbers are required for SVHC (less than 0.1 wt%) and JAMP declarable substances (less than 0.1 wt%) when such substances are used intentionally.

When substances are not used intentionally but have been identified and their concentration levels determined via a specific method, then provide their CAS numbers and concentrations.

- (4) Make sure to provide data concerning all substances besides SVHC and JAMP declarable substances by referring to the List of Chemical Substances Subject to Survey (Table 6).

When the CAS number for a substance is entered in the AIS input support sheet, the name of the substance will not be displayed if it is not a JAMP declarable substance. Enter the necessary information manually so that the total percentage of substances will total 100.

Note: not all substances are listed in the List of Chemical Substances Subject to Survey (Table 6).

- (5) If there are ranges within the composition, please enter maximum, median, average, representative values, etc. so that they make 100%. (Use maximum values for SVHC as defined under the REACH Regulation as well as JAMP declarable substances.)
- (6) When a substance is exempt from the RoHS and ELV Directives, enter the code as specified in the JAMP Table of Intended Use Classification Code in the "Exempted Application" field under the "Concerned Regulation or Other Documents" column on the AIS form.
- (7) Leave the CAS number field blank when a substance has not been assigned a CAS number or when it is a compound.

6-1-4. Selecting File Format and Applicable Standards for JAMP Forms

- (1) Always use the Excel (XML) format when submitting data via JAMP MSDSplus or AIS.
- (2) Choose PBT, GADSL and JIG for MSDSplus and GADSL and JIG for AIS.

6-1-5. When Data on All Constituents Cannot Be Provided via JAMP AIS

When you are unable to provide data on all constituents of a part via AIS, please contact the Minebea department that placed the order with you. The department placing the order may request that the data be provided via Minebea’s Environmental Hazardous Substances Survey Report form or as a constituent table in a format used by your company. Copies of the Environmental Hazardous Substances Survey Report form and sample form can be obtained from the Minebea department that places an order with you or can be downloaded from the Minebea Web site.

6-1-6. When Data on All Constituents Cannot Be Provided

Contact the Minebea department that placed the order with you.

Table 5: Data to Be Provided via MSDSplus/AIS

Form	Part/Material	REACH-defined SVHC JAMP declarable substances		Other substances	Remarks
		0.1 wt% or higher	Less than 0.1 wt%		
MSDSplus	Chemical substances and mixtures (preparations)	CAS numbers required	CAS numbers optional (*1)	Not required	Use homogenous material as denominator
AIS	Articles	CAS numbers required	CAS numbers optional (*1)	CAS numbers optional	Use homogenous material as denominator

*1: Required for intentional uses

Table 6: List of Chemical Substances Subject to Survey

No.	Chemical substance group	
1	Antimony and its compounds	
2	Arsenic and its compounds (excluding wood preservatives)	
3	Beryllium and its compounds (excluding oxidized beryllium)	
4	Bismuth and its compounds	
5	Nickel and its compounds (excluding uses in parts that come into contact with the human body)	
6	Selenium and its compounds	
7	Magnesium	
8	Iron	
9	Stainless steel	
10	Aluminum	
11	Copper and its compounds	
12	Zinc and its compounds	
13	Chrome and its compounds (excluding hexavalent chromium)	
14	Vanadium and its compounds	
15	Cobalt and its compounds (cobalt chloride: excluding desiccants and humidity indicators)	
16	Barium and its compounds	
17	Boron and its compounds	
18	Manganese and its compounds	
19	Molybdenum and its compounds	
20	Organic tin compounds (excluding Group II prohibited chemical substances and articles subject to control)	
21	Polyvinyl chloride (PVC) (when used for purposes other than packaging/packing materials)	
22	Fire retardant	Bromine fire retardants (fire retardants other than PBB, PBDE)
		Halogen fire retardants excluding bromines
		Fire retardants other halogens

23	Halogens (F, Cl, Br, I, At) and halogen compounds (organic/inorganic compounds)
24	Phthalate esters (excluding Group II prohibited chemical substances and articles subject to control)
25	Ozone depleting substances: Montreal Protocol Annex C Group I (HCFC) only
26	Thermoplastics: ABS, POM, PC, PE, PET, PP, PPE, PS, PC+ABS, PC+PS, other
27	Thermosetting plastic: Alk, DAP, UF, MF, EP, PF, UP, SI, PUR, other
28	Rubber
29	Timber
30	Glass
31	Paper and pulp
32	Fibers (cotton, linen, synthetic fibers, etc.)
33	Acrylamide
34	Acrylic acid
35	Acetaldehyde
36	Cresol
37	Nonylphenol
38	Phenol and its resins
39	Rare metals (rare earth substances) and precious metals (e.g. gold, palladium, silver, platinum and their compounds)

6-2. Certificate of Non-Use of Prohibited Chemical Substance

Form-2, Certificate of Non-Use of Prohibited Chemical Substance (Non-Use Certificate), certifies that suppliers do not intentionally use prohibited chemical substances and that such substances do not exceed legal limits or Minebea regulatory limits. The Non-Use Certificate is designed for Group I Prohibited Chemical Substances and Group II Prohibited Chemical Substances.

In cases where any of the Group I prohibited chemical substance is exempt from the requirements of EU RoHS Directive or ELV Directive, enter the substance name, part, and legal basis of exemption (exempt usage or Annex No.).

Complete and submit Form-3, Non-Use Certificate List, when reporting on multiple parts and materials.

(See Attachment-1 Sample Non-Use Certificate List.)

6-3. Report of Analysis Results and Analysis Report

(1) Chemical substances to be reported

Chemical substances to be reported in the Report of Analysis Results and Analysis Report are the six substances of the EU RoHS Directive: cadmium (Cd), lead (Pb), hexavalent chromium, (Cr⁶⁺), mercury (Hg), PBB and PBDE. (See Table 7)

Table 7: Applicable Portions and Analysis Items for Report of Analysis Results for Each Homogeneous Material (o: applicable, -: exempt)

Parts and materials, applicable portion	Cd	Pb	Cr ⁶⁺	Hg	PBB	PBDE
Plastic resin (including rubber), ink, pigments, dyes, paints, grease, oil, adhesives etc.	o	o	o	o	o	o
Metals, metal alloys, plating, ceramics, glass etc.	o	o	o	o	-	-
Packaging/packing materials	o	o	o	o	-	-

(2) Analysis data to be submitted

Submit the following documents as a set.

(a) Report of Analysis Results (Form-4)

A report outlining the analysis results for each homogeneous material in parts and materials.

(See Attachment-1 Sample Non-Use Certificate List.)

(b) Analysis Report

(c) Structural drawing and bill of material

Structural drawing which shows the internal condition of parts to clarify the portion being analyzed, the chart of material composition associated with the structural drawing.

The form of structural drawing and chart of material composition is at the supplier discretion.

Use Attachment-3, Structural Diagram, Bill of Material – Entry Sample, as a reference when preparing a structural drawing and bill of material.

When the parts are composed of a single material, raw material, pellets, film, sheet, etc. (excluding laminated materials), there is no need to submit a structural drawing and chart of material composition.

(3) Validity period and updating management for Report of Analysis Results and Analysis Report

The effective period of Report of Analysis Results and Analysis Reports is one year from the date of measurement. We ask you to provide annual updates. If you cannot perform an update annually, please submit a formal document explaining the reasons (statement explaining supplier's opinion, reason etc.).

Once we have reviewed the submitted document, we will contact you and provide you with instructions to follow.

(4) Language of Analysis Report

Analysis Reports shall be written in English or Japanese. However, when submitting Analysis Reports in Japanese, you may be asked to obtain a separate English translation depending on our customers' requirements.

(5) Items that must be entered in Analysis Report

Please enter the following items in the Analysis Report

- Sample name (to be defined so that it can be related with the submitted data for each homogeneous material)
- Sample preparation method: official method name, or name of the method if different from the official method
- Measurement method: measurement method name or official method name
- Name of analysis laboratory, corporate seal
- Names and signatures of a responsible person at the analysis laboratory and a person who performed measurements
- Date of issue, date of measurement
- Measurement results (if N.D., or not detectable, enter quantification limit value)
- Analysis flowchart: document that indicates the flow of analysis, such as sampling, preparation and measurement operations. Use Attachment-5, Sample Analysis Flow Chart, as a reference when preparing an analysis flowchart.
- If sample preparation involves dissolution, note that the sample was completely dissolved (this can be recorded on the analysis flowchart).
- Image of sample (The image must be clear enough to enable identification of the sample and the areas measured.)

(6) Submission of Analysis Reports from ISO/IEC 17025 certified laboratories

Requests will be made in cases where an Analysis Report by the ISO/IEC17025 certified laboratory is required to meet customer requirements.

(7) Designation of analysis laboratory and analysis method

Please use a laboratory capable of performing the analysis methods shown in section 7.

An analysis laboratory or method may be designated in order to meet customer requirements. Requests will be made individually as needed.

(8) Request of resubmission of Report of Analysis Results

In the event of noncompliance due to levels in excess of regulatory limits (threshold levels) detected during an incoming inspection by Minebea or its customers, you will be asked to perform an analysis again and resubmit the Report of Analysis Results and Analysis Report. Requests will be made individually as needed.

(9) Requests for submission of Report of Analysis Results and Analysis Reports for substances other than the six substances specified in the EU RoHS Directive

If requested by Minebea's customers, you may be asked to submit Reports of Analysis Results and Analysis Reports for substances other than the six substances specified in the EU RoHS directive. Requests will be made individually as needed.

(10) Method for obtaining Analysis Reports

Obtain Analysis Reports that meet this Standard or equivalent requirements from your suppliers.

6-4. MSDS (Material Safety Data Sheet)

Manufacturer's MSDSs are issued for materials such as chemicals, resins, adhesives, pigments, paints, inks etc. Please obtain and submit them. If any changes are made to the content of a MSDS, please submit a new version promptly.

6-5. Mill Sheets

Manufacturer's mill sheets are issued for materials such as metals, metal alloys, and other processed goods etc. Please obtain and submit them.

6-6. Component List (Form-5)

If a single part or material is composed of multiple components, please prepare and submit a component list, relating the MSDSs, mill sheets, and other report data with the composing part names and data numbers.

(See Attachment-4 Sample Component List.)

7. Analysis Methods

Analysis methods for the six substances specified in the EU RoHS Directive must be in compliance with IEC 62321.

7-1. Analysis Methods for Cadmium, Lead and Mercury

Analysis methods for cadmium, lead and mercury must be in compliance with the main text of IEC 62321.

Include the sample preparation method and analysis method used in your Analysis Report.

7-2. Analysis of Hexavalent Chromium, PBB and PBDE

(1) Analysis methods for hexavalent chromium must be in compliance with Annex B of IEC 62321.

(a) Metals: Boiling water extraction method

(b) Polymeric materials and electronic devices: Alkali fusion method

(2) The Soxhlet extraction method described in Annex A of IEC 62321 should be used for analysis of PBB and PBDE.

Ultrasonic extraction can also be used for water-soluble polymeric materials.

8. Important Information Concerning Packaging/Packing Materials

Packaging/packing materials used by suppliers to transport/protect parts and materials when they are to be delivered to Minebea are not subject to the requirements specified in sections 6 through 7.

However, suppliers shall observe the following to ensure smooth disposal and recycling of packaging materials within Minebea.

- Heavy metals such as cadmium, lead, hexavalent chromium and mercury shall be less than 100 mg/kg(ppm) in total.
- Plastic tapes and metal staples (large staples) shall not be used.
- Foam polystyrene shall not be used (except when it is used as reusable packaging material). Contact us when it is to be used to protect parts and materials.
- PVC packaging/packing materials shall not be used (excluding reusable container boxes).

9. Supplementary Provisions

The provisions set forth in this Standard shall become effective as of July 1, 2010.

The forms accompanying the third edition of this Standard may be used during a transitional period ending September 30, 2010.

Any correction, addition or revision to this Standard shall be posted on the procurement page of the Minebea Web site at the address shown below until the fifth edition of this Standard is published. The correction, addition or revision posted on the said Web site shall supersede this Standard and become effective as of the date specified.

URL: <https://www.minebea.co.jp/english/procurements/green/index.html>

Attachment-1 Sample Non-Use Certificate List

Sample Non-Use Certificate List

PAGE : 1 OF 1

Company Name
 Plant/Mfg Dept Company Name (your company): XYZ Co., Ltd.

Minebea part code	Your company's part code	Product/Part name	Type/Specification, etc.	Manufacturer	Exemption Annex No./Usage
1234-5678	ABC-DEF-GHI	Lubricant	FKX-001	ABC Co., Ltd.	
2000-0001	RST-UVW-XYZ	Lubricant	GKX-001	ABC Co., Ltd.	
9999-9999	NMO-PQR-STU	Lubricant	HKZ-001	ABC Co., Ltd.	

PAGE : 1 OF 1

Company Name
 Plant/Mfg Dept Company Name (your company): XYZ Co., Ltd.

Minebea part code	Your company's part code	Product/Part name	Type/Specification, etc.	Manufacturer	Exemption Annex No./Usage
34-56-789	ABC-DEF-GHI	Lubricant	FKZ-001	ABC Co., Ltd.	
12-34-567	RST-UVW-XYZ	Lubricant	FKY-001	ABC Co., Ltd.	

PAGE : 1 OF 1

Company Name
 Plant/Mfg Dept Company Name (your company): XYZ Co., Ltd.

Minebea part code	Your company's part code	Product/Part name	Type/Specification, etc.	Manufacturer	Exemption Annex No./Usage
001-001	NMO-PQR-STU	Lubricant	HKZ-001	ABC Co., Ltd.	
456-789	ABC-DEF-GHI	Lubricant	FKZ-001	ABC Co., Ltd.	

Attachment-2 Report of Analysis Results – Sample

[Report of Analysis Results] - Sample

Product Name	
Model Name	

Request №

Date	
Company	
Address	
Section/department	
Person responsible	
Person in charge	
Telephone number	
Email address	

Enter analysis result values in mg/kg.

No.	Part name	Material name Type name (model) Manufacturer	Cd	Pb	C _r ⁶⁺	Hg	PBB	PBDE
			Report №	Report №	Report №	Report №	Report №	Report №
			Measurement Date	Measurement Date	Measurement Date	Measurement Date	Measurement Date	Measurement Date
			Analysis result values	Analysis result values	Analysis result values	Analysis result values	Analysis result values	Analysis result values
1	Printing ink	PET printing ink	INK-1	INK-1	INK-1	INK-1	INK-1	INK-1
			YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD
			N.D. (5mg/kg)	8.1	N.D. (2mg/kg)	N.D. (2mg/kg)	N.D. (5mg/kg)	N.D. (5mg/kg)
2	Aluminum foil (+ or -)	Aluminum foil for capacitor BBB-222 Manufactured by AAA Co. Ltd.	AL-2	AL-2	AL-2	AL-2	-	-
			YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD		
			N.D. (5mg/kg)	N.D. (5mg/kg)	N.D. (5mg/kg)	N.D. (5mg/kg)	-	-
3	Sealing rubber	Butyl-rubber CCC-333 OOO Co.,Ltd.	B-005	B-005	B-005	B-005	B-005	B-005
			YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD
			N.D. (5mg/kg)	14.0	N.D. (5mg/kg)	N.D. (5mg/kg)	N.D. (5mg/kg)	N.D. (5mg/kg)
4	Lead wire (+)	TPC Wire DDD-444 O Co.,Ltd.	R001-1	R001-1	R001-1	R001-1	-	-
			YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD		
			N.D. (5mg/kg)	19.0	N.D. (5mg/kg)	N.D. (5mg/kg)	-	-
5	Lead wire plating	Nickel plating DDD-444 O Co.,Ltd.	R001-2	R001-2	R001-2	R001-2	-	-
			YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD		
			N.D. (5mg/kg)	N.D. (5mg/kg)	N.D. (5mg/kg)	N.D. (5mg/kg)	-	-
6	Outer tube	PET EEE-555 Manufactured by EEE Co.,Ltd.	CH-01	CH-01	CH-01	CH-01	CH-01	CH-01
			YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD
			N.D. (5mg/kg)	N.D. (5mg/kg)	N.D. (5mg/kg)	N.D. (5mg/kg)	N.D. (5mg/kg)	N.D. (5mg/kg)
7	Case	Aluminum case FFF-666 Manufactured by ABC Co.,Ltd.	ALK03	ALK03	ALK03	ALK03	-	-
			YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD		
			N.D. (5mg/kg)	N.D. (5mg/kg)	N.D. (5mg/kg)	N.D. (5mg/kg)	-	-
8	Electrolytic paper	PP Tape GGG-777 Manufactured by DEF Co.,Ltd.	PP001	PP001	PP001	PP001	PP001	PP001
			YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD
			N.D. (2mg/kg)	N.D. (5mg/kg)	N.D. (5mg/kg)	N.D. (5mg/kg)	N.D. (5mg/kg)	N.D. (5mg/kg)
9	Electrolytic solution	Electrolytic Solution AB Manufactured by HHH- 888 in-house	DAB-01	DAB-01	DAB-01	DAB-01	DAB-01	DAB-01
			YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD
			N.D. (5mg/kg)	N.D. (5mg/kg)	N.D. (5mg/kg)	N.D. (5mg/kg)	N.D. (5mg/kg)	N.D. (5mg/kg)
10	Lead wire (-)	TPC Wire DDD-444 Manufactured by DDD Co.,Ltd.	TPC-03	TPC-03	TPC-03	TPC-03	-	-
			YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD		
			N.D. (5mg/kg)	19.0	N.D. (5mg/kg)	N.D. (5mg/kg)	-	-
11	Lead wire plating	Nickel plating DDD-444 Manufactured by DDD Co.,Ltd.	TPC-04	TPC-04	TPC-04	TPC-04	-	-
			YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD		
			N.D. (5mg/kg)	N.D. (5mg/kg)	N.D. (5mg/kg)	N.D. (5mg/kg)	-	-

If analysis result is N.D., enter N.D. (determination limit). Example: N.D. (5mg/kg)

Indicate the following items in the analysis report submitted with the Report of Analysis Results.

- Picture of sample
- Sample name
- Pretreatment method
- Measurement method
- Name of analysis laboratory, corporate seal
- Name of responsible person at the analysis laboratory, name of person who performed measurements
- Date of measurement, date of issue
- Measurement results
- Analysis flowchart

Structural Drawing and Bill of Material (Entry Sample)

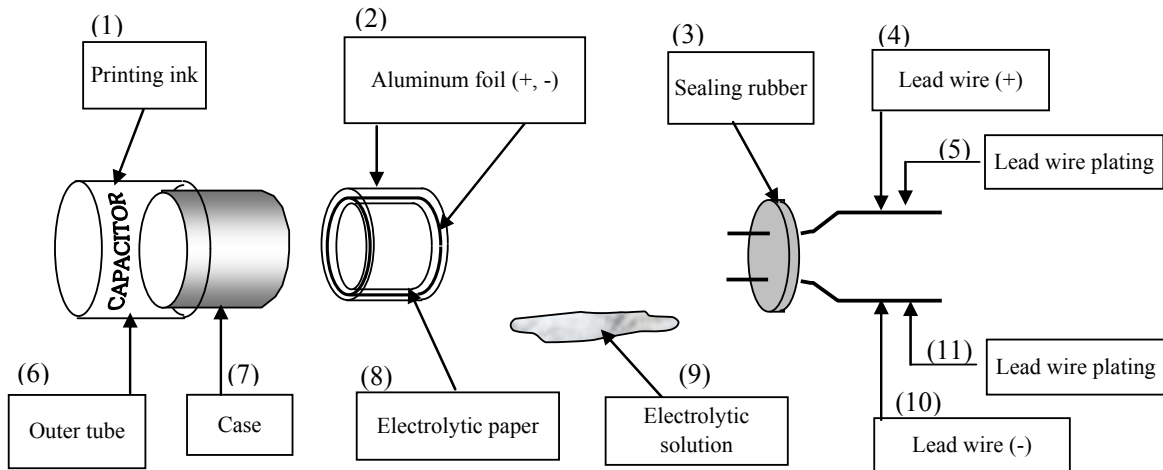
Product Name	
Model Name	

Date Prepared:

Person responsible	
Prepared by	

Structural drawing

*If the product is composed of a single material (raw material, film, sheet etc.) there is no need to submit a structural drawing/bill of material.



Bill of Material

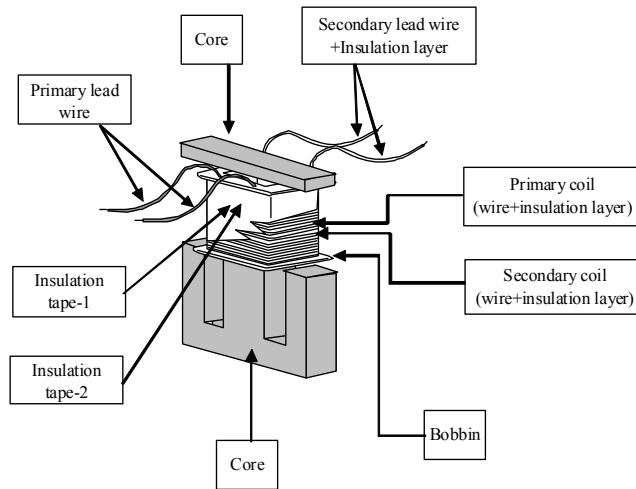
*If the product is composed of a single material (raw material, film, sheet etc.) there is no need to submit a structural drawing/bill of material.

No	Part name	Material name	Type name (model), manufacturer
(1)	Printing ink	PET printing ink	AAA-111 Company OOOO
(2)	Aluminum foil (+, -)	Aluminum foil for condenser	BBB-222 Manufactured by company AAA
(3)	Sealing rubber	Butyl-rubber	CCC-333 Company OO
(4)	Lead wire (+)	TPC Wire	DDD-444 Company O
(5)	Lead wire plating	Nickel plating	DDD-444 Company O
(6)	Outer tube	PET	EEE-555 Manufactured by company EEE
(7)	Case	Aluminum case	FFF-666 Manufactured by company ABC
(8)	Electrolytic paper	PP Tape	GGG-777 Manufactured by company DEF
(9)	Electrolytic solution	Electrolytic Solution AB	HHH-888 Manufactured in-house
(10)	Lead wire (-)	TPC Wire	DDD-444 Company O
(11)	Lead wire plating	Nickel plating	DDD-444 Company O

Attachment-4 Sample Component List 1/3

Component List (Bill of Material)

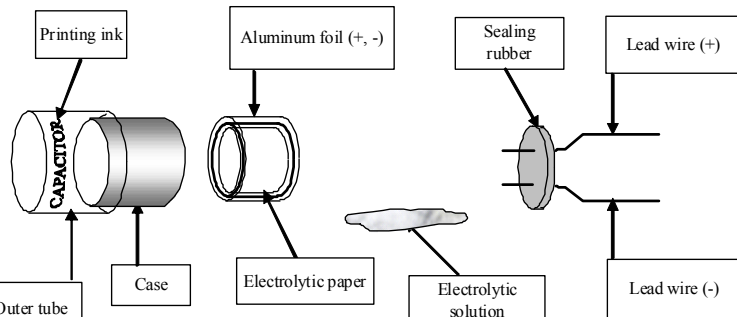
Sample - 1



Product Name	Transformer
Model Name	TR-5555, 100V

NO.	Component Name	MSDS Data No.	Mill Sheet Data No.	Other Data No.	Remarks
1	Bobbin	No.3	-	-	
2	Primary coil	-	-	-	
3	Secondary coil	-	-	-	
4	Insulation tape-1	No.10	-	-	
5	Insulation tape-2	No.11	-	-	
6	Primary lead wire	-	-	-	
7	Secondary lead wire	-	-	-	
8	Core	No.18	No.19	-	

Sample - 2

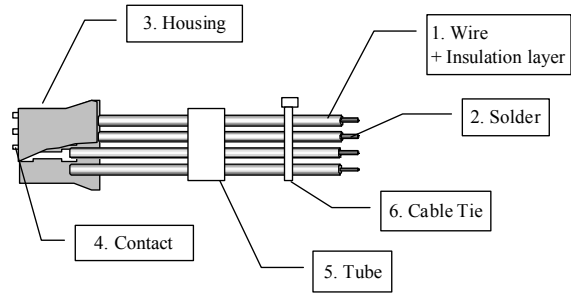


Product Name	Electrolytic condenser
Model Name	100μ F/100V

NO.	Component Name	MSDS Data No.	Mill Sheet Data No.	Other Data No.	Remarks
1	Case	-	-	-	
2	Sealant rubber	No.B-01	-	-	
3	Electrolytic solution	No.C-02	-	-	
4	Lead wire (+)	No.D-03	-	-	
5	Lead wire (-)	No.E-03	-	-	
6	Aluminum foil (+)	-	No.F-02	-	
7	Aluminum foil (-)	-	No.G-02	-	
8	Electrolytic paper	No.H-02	-	-	
9	Outer tube	No.I-03	-	-	
10	Printing ink	No.J-03	-	-	

Attachment-4 Sample Component List 2/3

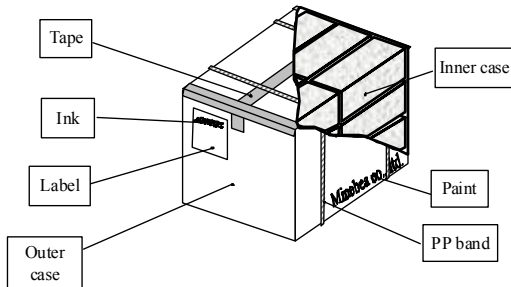
Sample - 3



Product Name	WIRE ASSY
Model Name	46WA-□□□ □□□

NO.	Component Name	MSDS Data No.	Mill Sheet Data No.	Other Data No.	Remarks
1	Wire	-	-	-	
2	Solder	002-1	-	-	
3	Housing	003-2	-	-	
4	Contact	-	-	-	
5	Tube	005-6	-	-	
6	Cable Tie	006-2	-	-	

Sample - 4

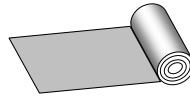


Product Name	Package
Model Name	Pack paper./Ink.

NO.	Component Name	MSDS Data No.	Mill Sheet Data No.	Other Data No.	Remarks
1	Outer case	No.001-6	-	-	
2	Inner case	No.002-6	-	-	
3	Tape	No.003-3	-	-	
4	Ink	No.004-6	-	-	
5	Label	No.005-6	-	-	
6	Paint	No.006-6	-	-	
7	PP band	No.007-5	-	-	

Attachment-4 Sample Component List 3/3

Sample - 5



Product Name	TAPE
Model Name	*****_**_*

NO.	Component Name	MSDS Data No.	Mill Sheet Data No.	Other Data No.	Remarks
1	-	TP0001	-	-	

Sample - 6



Product Name	FILM SHEET
Model Name	*****_**_*

NO.	Component Name	MSDS Data No.	Mill Sheet Data No.	Other Data No.	Remarks
1	-	MSDS-1	-	-	

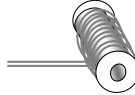
Sample - 7



Product Name	TUBE
Model Name	*****_**_*

NO.	Component Name	MSDS Data No.	Mill Sheet Data No.	Other Data No.	Remarks
1	-	NO.1	-	-	

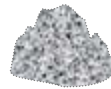
Sample - 8



Product Name	WIRE
Model Name	*****_**_*

NO.	Component Name	MSDS Data No.	Mill Sheet Data No.	Other Data No.	Remarks
1	-	W-01	-	-	

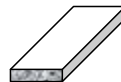
Sample - 9 (RAW MATERIAL)



Product Name	RESIN
Model Name	*****_**_*

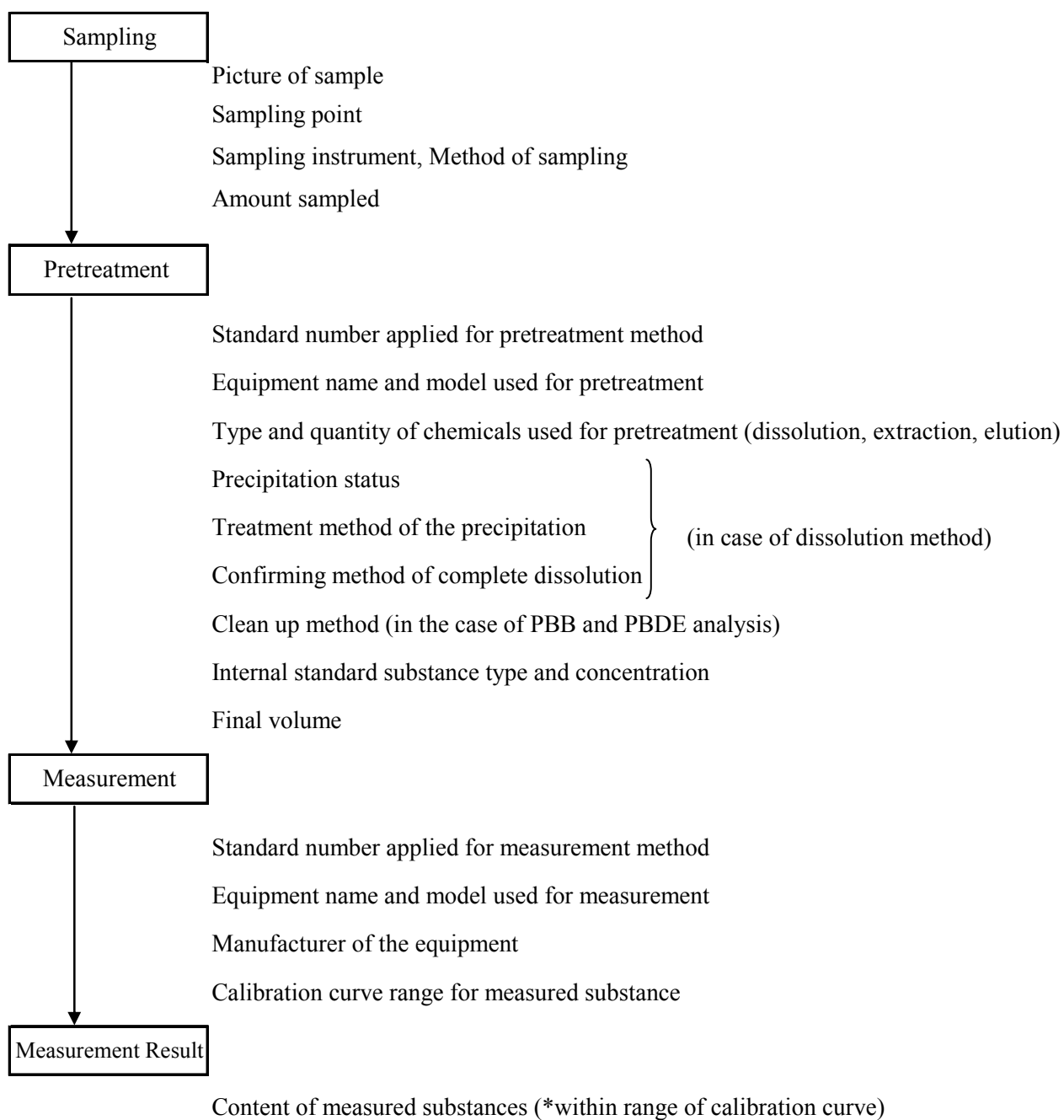
NO.	Component Name	MSDS Data No.	Mill Sheet Data No.	Other Data No.	Remarks
1	-	A-1	-	-	

Product Name	STEEL
Model Name	*****_**_*



NO.	Component Name	MSDS Data No.	Mill Sheet Data No.	Other Data No.	Remarks
1	-	-	1	-	

Attachment-5 Sample Analysis Flowchart



Annex-6 Items Exempt from EU RoHS Directive

Applications of lead, mercury, cadmium and hexavalent chromium, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE), which are exempted from the requirements of Article 4(1)

Substance	No. (*1)	Application and Concentration
Mercury (Hg)	1	Mercury in compact fluorescent lamps not exceeding 5 mg per lamp.
	2	Mercury in straight fluorescent lamps for general purposes not exceeding: - halophosphate 10 mg - triphosphate with normal lifetime 5 mg - triphosphate with long lifetime 8 mg.
	3	Mercury in straight fluorescent lamps for special purposes.
	4	Mercury in other lamps not specifically mentioned in this Annex.
	36	Deleted
Lead (Pb)	5	Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
	6	Lead as an alloying element in steel containing up to 0.35% lead by weight, aluminum containing up to 0.4% lead by weight and as a copper alloy containing up to 4% lead by weight.
	7	- Lead in high melting temperature type solders (i.e. lead based alloys containing 85% by weight or more lead) - Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signaling, transmission as well as network management for telecommunications - Lead in electronic ceramic parts (e.g. piezoelectric devices).
	9b	Lead in lead-bronze bearing shells and bushes
	11	Lead used in compliant pin connector systems.
	12	Lead and coating material for the thermal conduction module c-ring
	13	Lead and cadmium in optical and filter glass
	14	Lead in solders consisting of more than two elements for the connection between the pins and the package of microprocessors with a lead content of more than 80% and less than 85% by weight.
	15	Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
	16	Lead in linear incandescent lamps with silicate coated tubes.
	17	Lead halide as radiant agent in High Industry Discharge (HID) lamps used for professional reprography applications.
	18	Lead as activator in the fluorescent power (1% lead by weight or less) of discharge lamps when used as sun tanning lamps containing phosphors such as BSP (BaSi2O5:Pb) as well as when used as speciality lamps for diazo-printing reprography, lithography, insect traps, photochemical and curing process containing phosphors such as SMS((Sr,Ba)2MgSi2O7:Pb).
	19	Lead with PbBiSn-Hg and PbInSn-Hg in specific compositions as main amalgam and with PbSn-Hg as auxiliary amalgam in very compact Energy Saving Lamps(ESL)
20	Lead oxide in glass used for bonding front and rear substrates of flat fluorescent lamps used for Liquid Crystal Displays (LCD)	
21	Lead and cadmium in printing inks for the application of enamels on borosilicate glass.	
22	Lead as impurity in RIG (rare earth iron garnet) Faraday rotators used for fiber optic communications systems	
23	Lead in finishes of fine pitch components other than connectors with a pitch of 0.65mm or less with NiFe lead frames and lead in finishes of the fine pitch components other than connectors with a pitch of 0.65mm or less with copper lead frames.	

(Continued)

	24	Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacities.
	25	Lead Oxide in plasma panels(PDP) and surface conduction electron emitter displays(SED) used in structural elements; notably in the front and rear glass dielectric layer, the bus electrode, the black stripe, the address electrode, the barrier ribs, the seal frit and frit ring as well as in print pastes.
	26	Lead oxide in the glass envelope of Black Light Blue(BLB) lamps.
	27	Lead alloys as solder for transducers used in high-powered (designated to operate for several hours at acoustic power levels of 125 db SPL and above) loudspeakers.
	29	Lead bound in crystal glass as defined in Annex I (categories 1,2,3 and 4) of Council Directive 69/493/EEC.
	31	Lead in soldering materials in mercury free flat fluorescent lamps (which e.g. are used for liquid crystal displays, design or industrial lighting)
	32	Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes
	33	Lead in solders for the resoldering of thin copper wires of 100 µm diameter and less in power transformers.*2
	34	Lead in cermet-based trimmer potentiometer elements.
	37	Lead in the plating area of high voltage diodes on the basis of a zinc borate glass body.
Cadmium (Cd)	8	Cadmium and its compounds in electrical contacts and cadmium plating except for applications banned under Directive 91/338/EEC amending Directive 76/769/EEC relating to restrictions on the marketing and use of certain dangerous substances and preparations.
	13	Lead and cadmium in optical and filter glass.
	21	Lead and cadmium in printing inks for application of enamels on borosilicate glass.
	30	Cadmium alloys as electrical/mechanical solder joints to electrical conductors located directly on the voice coil in transducers used in high-powered loudspeakers with sound pressure levels of 100 dB(A) and more
	35	Cadmium in photoresistors for optocouplers applied in professional audio equipment until December 31, 2009.
	38	Cadmium and cadmium oxide in thick film pastes used on aluminium bonded beryllium oxide.
39	Cadmium in colour converting II-VI LEDs (< 10 µg Cd per mm ² of light- emitting area) for use in solid state illumination or display systems until July 1, 2014.	
Hexavalent chromium (Cr ⁶⁺)	9	Hexavalent chromium as an anti-corrosion of the carbon steel cooling system in absorption refrigerators.
	28	Deleted

*1: The numbers correspond to the Annex numbers assigned to the applications exempted from the requirements of Article 4(1) of the Directive 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS Directive) as prescribed under Article 4(2) of the said Directive.

*2: While lead in solders for the resoldering of thin copper wires of 100 µm diameter and less in power transformers is exempt from the RoHS Directive as specified under Annex No. 33 of the Directive, it is not exempt from this Standard.

Form-1 Special Requirement Form

Special Requirement Form

Mark the applicable boxes. (Indicate by either filling in or checking off the box.)

- This Special Requirement Form is issued as a notification of special requirements specified in the Annex(es).**
- This Special Requirement Form is issued as a notification of special requirements other than those specified in the Annexes.**

Document No.		Date Issued	
Plant Name / Issuing Department			
Issuer's Department		Issuer's Name	
Approver's Department		Approver's Name	

<input type="checkbox"/> Special requirements specified in Annex(es)	<input type="checkbox"/> Annex I: Special Requirements for Toys/Childcare Articles <input type="checkbox"/> Annex II: Special Requirements for Batteries <input type="checkbox"/> Annex III: Special Halogen-free Requirements <input type="checkbox"/> Annex IV: Special Requirements for Packaging/Packing Materials
<input type="checkbox"/> Special requirements other than those specified in Annex(es)	Special requirements:
Name, part number, model, figure number , etc. of applicable part	
Data to be submitted	As specified in section 6 of the Minebea Group Green Procurement Standard
Additional requirements	<input type="checkbox"/> No
	<input type="checkbox"/> Yes (Specify below)
Additional requirements:	

Form-2 Certificate of Non-Use of Prohibited Chemical Substance
Certificate of Non-Use of Prohibited Chemical Substances

Company: _____
 Department: _____

Company: _____
 Organization: _____
 Person Responsible: _____
 Person in Charge: _____
 E-mail : _____
 Phone: _____
 FAX: _____

We certify that the Group I and Group II chemical substances prohibited by Minebea Group as listed below are not used in the components etc. (raw materials, parts, components, packaging or packing materials) that are delivered to the Minebea Group. We further certify that in the case of prohibited chemical substances to which allowable concentration is specified, concentration in the application and the part are not exceeding such

Product/part name: _____
 Type/specification etc.: _____
 Manufacturer: _____
 Minebea part code: _____
 Our part code: _____
 Item code: _____

- Non-Use Certification List (Form-3) is attached due to the large number of parts being reported on.
 (Please check [✓] the box to indicate that a Non-Use Certification List is attached.)

Group I and Group II Chemical Substances Prohibited by Minebea Group

Please draw a circle (○) in the Check column if compliant.

Group I Prohibited Chemical Substances

No.	Substance	Regulatory Limit	Check
1	Cadmium and its compounds		
	Plastic, ink, grease, adhesives, etc.	< 5 mg/kg	
	Solder	< 20 mg/kg	
	Other applications	< 75 mg/kg	
2	Lead and its compounds		
	Plastic, ink, grease, adhesives, etc.	< 100 mg/kg	
	Lead-free solder	< 500 mg/kg	
	Other applications	< 1000 mg/kg	
3	Hexavalent chromium compounds	< 1000 mg/kg	
4	Mercury and its compounds	< 1000 mg/kg	
5	Polybrominated biphenyl (PBB)	< 1000 mg/kg	
6	Polybrominated diphenylether (PBDE)	< 1000 mg/kg	

Group II Prohibited Chemical Substances

See the following page.

Details on prohibited chemical substances can be found in the Minebea Group Green Procurement Standard (4th Edition).

When substance that falls under exemption is intentionally used, put a circle (○) in the Check Column, and enter the substance name, part, and legal basis, in the box below.

Substance name: Part: Exempt application, Attached Document No.:
--

Form-2 Certificate of Non-Use of Prohibited Chemical Substance 2/2

Group II Prohibited Chemical Substances

No.	Substance	Regulatory Limit	Restriction	Check
7	Bis (tributyl tin) = oxide (TBTO)	—	All uses	
8	Tributyl tin (TBT)	< 0.1 wt%	All uses	
	Triphenyl tin (TPT)		All uses	
	Dibutyl tin (DBT)		Compliance deadline for DBT and DOT: January 1, 2012	
	Diocetyl tin (DOT)			
9	Polychlorinated biphenyls (PCB)	—	All uses	
10	Polychlorinated naphthalene (PCN)	—	All uses	
11	Polychlorinated taphenyl (PCT)	< 0.005 wt%	All uses	
12	Short-chain chlorinated paraffin	—	All uses	
13	Asbestos	—	All uses	
14	Azo pigments and azo dye	< 30 mg/kg	Uses in parts that come into contact with the human body	
15	Ozone depleting substances: substances subject to the Montreal Protocol	—	All uses	
16	Radioactive substances	—	All uses	
17	Formaldehyde	*1	Timber products	
18	Dioxins	—	All uses	
19	2-(2'-hydroxy-3',5'-di-tert-butylphenyl) benzotriazole	—	All uses	
20	Perfluorooctane sulfonate (PFOS)	< 50 mg/kg	Preparations or mixtures	
		< 1000 mg/kg	Half-finished goods, articles	
		< 1 µg/m2	Textiles, coating material	
21	Beryllium oxide	—	All uses	
22	Phthalate Esters	Total of 3 < 1000 mg/kg	Toys and childcare articles	
	- Bis (2-ethylhexyl) phthalate (DEHP)			
	- Dibutyl phthalate (DBP)			
	- Benzylbutyl phthalate (BBP)			
23	Phthalate Esters	Total of 3 < 1000 mg/kg	Toys and childcare articles that children can put into their mouths	
	- Diisononyl phthalate (DINP)			
	- Diisodecyl phthalate (DIDP)			
	- Di-n-octyl phthalate (DNOP)			
24	Cobalt chloride	—	Desiccants and humidity indicators	
25	Nickel	—	Uses in parts that come into contact with the human body	
26	Dimethylfumarate (DMF)	< 0.1 mg/kg	All uses	
27	Hexachlorobenzene (HCB)	—	All uses	
28	2,4,6-tri-tert-butylphenol	—	All uses	
29	Mirex	—	All uses	
30	Polyvinyl chloride and its mixtures	—	Packaging/packing materials, and articles required to be halogen-free	
31	Cyclohexane	—	All uses Compliance deadline for polychloroprene: December 31, 2010	
32	Benzene	5 mg/kg	Toys and toy parts	
		0.1 wt%	Substances and mixtures	
33	Arsenic compounds	—	Wood preservatives	
34	Monomethyl-tetrachloro-diphenyl methane	—	All uses	
35	Monomethyl-dichloro-diphenyl methane Product name: Ugilec 121, Ugilec 21	—	All uses	
36	Monomethyl-dibromo-diphenyl methane (DBBT) or Bromobenzylbromotoluene (DBBT)	—	All uses	
37	Trichlorobenzene	< 0.1 wt%	All uses	

*1 See section 4-2 of the Minebea Group Green Procurement Standard for more details.

Annex I

Special Requirements for Toys/Childcare Articles

This Annex will be in effect when notified via the Special Requirement Form (Form-1).

1. Prohibited Chemical Substances in Toys and Childcare Articles and Their Regulatory Limits

1-1. Regulated chemical substances in toys and childcare articles and their legal limits

As shown in the table below.

1-2. Any substances listed as Group I, Group II, or Group III prohibited chemical substances are banned if they are regulated for use in toys and childcare articles.

Table 1: Regulated Chemical Substances in Toys and Childcare Articles and Their Legal Limits

Substance	Legal Limit	Restriction
Antimony and its compounds	< 60 mg/kg(ppm)	Usage in toys/childcare articles
Arsenic and its compounds	< 25 mg/kg(ppm)	
Barium and its compounds	< 1000 mg/kg(ppm)	
Cadmium and its compounds	< 75 mg/kg(ppm)	
Chrome and its compounds	< 60 mg/kg(ppm)	
Lead and its compounds	< 90 mg/kg(ppm)	
Mercury and its compounds	< 60 mg/kg(ppm)	
Selenium and its compounds	< 500 mg/kg(ppm)	

Analysis methods of concentrations of chemical substances in toys/childcare articles shown in the table shall comply with the EN71-3:1994 standard for toy safety. Note that the EN71-3:1994 standard employs dissolution testing, which is different from the content measurement specified by the RoHS Directive.

Table 2: Requirements Overlapping with Group II Prohibited Chemical Substances

Substance	CAS No.	Legal Limit	Restriction
Phthalate Esters		Total of 3 < 1000 mg/kg(ppm)	Toys and childcare articles
- Bis (2-ethylhexyl) phthalate (DEHP)	117-81-7		
- Dibutyl phthalate (DBP)	84-74-2		
- Benzylbutyl phthalate (BBP)	85-68-7		
Phthalate Esters		Total of 3 < 1000 mg/kg(ppm)	Toys and childcare articles that children can put into their mouths
- Diisononyl phthalate (DINP)	28553-12-0		
- Diisodecyl phthalate (DIDP)	68515-48-0		
- Di-n-octyl phthalate (DNOP)	26761-40-0		
	68515-49-1		
	117-84-0		

Note: Compliance with additional requirements other than the above, if any, may be specified and requested via the Special Requirement Form (Form-1).

Annex II

Special Requirements for Batteries

This Annex will be in effect when notified via the Special Requirement Form (Form-1).

1. Prohibited Chemical Substances Related to Batteries

With regard to batteries that are incorporated into products, the table below shall apply basically following the Directive 2006/66/EC on batteries and accumulators and waste batteries and accumulators and repealing Directive 91/157/EEC (new battery directive).

Table 1: Prohibited Chemical Substances Related to Batteries

Substance	Target	Prohibition or Legal Limit
Cadmium	Nickel/cadmium batteries	Prohibited
	Portable battery or accumulator	< 20 mg/kg(ppm)
Lead	Compact sealed lead-acid batteries	Prohibited
	All batteries or accumulators	< 0.4%
Mercury	All batteries or accumulators, excluding button batteries	< 5 mg/kg(ppm)
	Button batteries	< 2%

The legal limits are specified in proportion to total weight.

Note: Compliance with additional requirements other than the above, if any, may be specified and requested via the Special Requirement Form (Form-1).

Annex III

Special Halogen-free Requirements

This Annex will be in effect when notified via the Special Requirement Form (Form-1).

1. Scope of Halogen-free Requirements and Regulatory Limits

Parts and materials shall be deemed halogen-free when the following standard is met.

Table 1: Types of Halogen and Their Regulatory Limits mg/kg(ppm)

Halogen	Regulatory Limit	Remarks
Chlorine (Cl)	< 0.09 wt% (900 mg/kg)	Parts and materials are halogen-free when concentrations of both chlorine and bromine are less than 0.09 wt% (900 mg/kg), with total chlorine/bromine content being less than 0.15 wt% (1500 mg/kg).
Bromine (Br)	< 0.09 wt% (900 mg/kg)	
Chlorine (Cl) + Bromine (Br)	< 0.15 wt% (1500 mg/kg)	

2. Analysis Method for Halogens (Chlorine and Bromine)

Flask combustion ion chromatography shall be used as an analysis method for halogens (chlorine and bromine). The analytical procedure should follow the JPCA-ES01-2003 Test Method for Halogen-free Materials specified by Japan Printed Circuit Association (JPCA), or its equivalent.

Note: Compliance with additional requirements other than the above, if any, may be specified and requested via the Special Requirement Form (Form-1).

Annex IV

Special Requirements for Packaging/Packing Materials

This Annex will be in effect when notified via the Special Requirement Form (Form-1).

1. Definition of Packaging/Packing Materials

Packaging/Packing Materials are products, composed of any kind of material, in which goods, from raw materials to processed goods, are to be contained, protected, handled, transported and delivered during the process of moving them from the manufacturer to the users or consumers.

2. Packaging/Packing Materials Subject to this Annex

The requirements of this Annex shall apply to packaging/packing materials which Minebea procures and uses when delivering its products to customers.

(1) Legal limits of metals and metal compounds in packaging/packing materials

Table 1 shows legal limits of metals and metal compounds in packaging/packing materials.

Table 1: Legal Limits of Metals and Metal Compounds in Packaging/Packing Materials

No.	Substance	Legal Limits	Main Packaging/Packing Materials
1	Cadmium and its compounds	Sum of the 4 elements < 100 mg/kg(ppm)	Cartons (boxes), cushioning materials, protective bags (sheets), plastic bags, envelopes, blister packs, clamshells, partitions, spacers, printing inks, adhesive tapes, staples, labels, joints, binding bands, hanging tabs, handles, frames, shrink films, bottles, sleeves, decorative boxes, skids, stoppers, trays, reels, stretch films, bands, strings, etc.
2	Lead and its compounds		
3	Hexavalent chromium compounds		
4	Mercury and its compounds		

Note: The allowable concentration of heavy metals (mercury, cadmium, hexavalent chromium and lead) in packaging/packing materials shall be determined for each part composing the packaging/packing materials (e.g., resin, ink, paint, carton, tapes, etc.), and total of cadmium, lead, hexavalent chromium and mercury shall be less than 100 mg/kg(ppm), and lead content shall be less than 100 mg/kg(ppm). However, the allowable concentration of cadmium shall be less than 5 mg/kg(ppm) in each part, such as plastic resin (including rubber), paint, and ink.

(2) Regulations on polyvinyl chloride and its mixtures used in packaging/packing materials

Table 2 outlines regulations on polyvinyl chloride and its mixtures used in packaging/packing materials.

Table 2: Polyvinyl Chloride and Its Mixtures Used in Packaging/Packing Materials

No.	Substance	Regulation	Main Packaging/Packing Materials
1	Polyvinyl chloride and its mixtures	Intentional use prohibited	Cushioning materials, protective sheets, plastic bags, blister packs, films, clamshells, partitions, spacers, adhesive tapes, labels, joints, binding bands, hanging tabs, handles, frames, shrink films, bottles, sleeves, skids, stoppers, trays, reels, stretch films, bands, strings, etc.

Note: Compliance with additional requirements other than the above, if any, may be specified and requested via the Special Requirement Form (Form-1).

Minebea Group Green Procurement Standard 4th Edition revised on April 20, 2010

Explanation of Revisions

The REACH Regulation was implemented by the European Union in 2007 after the third edition of this Standard had been issued. Since then, compliance with the Regulation has increasingly been reflected in customer requirements.

Joint Article Management Promotion-consortium (JAMP) was formed in order to ensure compliance with the REACH Regulation. As a member of the consortium, Minebea has introduced JAMP Guidelines for the Management of Chemical Substances in Products, AIS, and MSDSplus to its green procurement practices as mechanisms that facilitate the control of chemical substances as well as information disclosure and sharing throughout its supply chain.

The fourth edition of the Standard has been revised and updated in order to incorporate these JAMP mechanisms. Changes in the composition and format of the Standard are listed in Appendix Table-1 below, which compares the third and fourth editions.

Specific revisions, other than those correcting obvious errors or clarifying confusing expressions, are as described below.

1. Section 4: Prohibited Chemical Substances

(1) Group I

Lead in solders for the resoldering of thin copper wires of 100 µm diameter and less in power transformers, which is exempt from the RoHS Directive as specified under Annex No. 33 of the Directive, is not exempted from this Standard.

The following changes were made in Table 1, Group I Prohibited Chemical Substances.

(Formerly) allowable concentration → (Revised) Minebea regulatory limit

(Formerly) ppm → (Revised) mg/kg

(2) Group II (See Appendix Table-2)

Group II and Group III in the third edition have been combined into Group II in the fourth edition. Substances that are not or unlikely to be contained in Minebea products have been deleted from this group.

(3) Group III

Instead of names of prohibited chemical substances, Group III is now shown as a list of laws, regulations, international treaties, and industry standards for chemical substances that are currently in effect throughout the world and require compliance.

2. Section 4-4: Ban on the Use of Recycled Plastics

A written provision concerning the ban on the use of recycled plastics has been added.

3. Annexes

Annexes have been created in order to clearly distinguish the individual requirements of Minebea's customers.

When compliance with the requirements specified in Annexes is required, the Special Requirement Form (Form-1) shall be used to notify suppliers.

The following sections of the third edition have been revised as Annexes. Halogen-free requirements have also been added as an Annex.

(Formerly) 4-4. Chemical substances the use of which is prohibited in toys/childcare articles → (Revised) Annex I

(Formerly) 4-5. Prohibited Chemical Substances Related to Batteries → (Revised) Annex II

(Formerly) 6. Packaging/Packing Materials → (Revised) Annex IV

(New) Halogen-free requirements → Annex III

4. Section 5-1: Basics of Operation Method

Guidelines for controlling chemical substances contained in products have been replaced with JAMP Guidelines for the Management of Chemical Substances in Products.

5. Section 5-3: Control of Changes

A paragraph has been added, stating that suppliers are required to contact the Minebea department that has placed an order with them for approval before making any change.

6. Section 5-4: Occurrence of Abnormalities or Noncompliance

Paragraphs have been added, stating that suppliers are required to provide written notification to the Minebea department that has placed an order with them and take corrective measures in the event of any abnormality or noncompliance.

7. Section 6: Data Requested for Submission

Documents that provide data on chemical substances contained in products have been added to the information suppliers are asked to submit.

Recommended use of JAMP AIS and MSDSplus for sharing data on chemical substances contained in parts and materials has been added. Areas that require attention when using these tools (in particular, the fact that CAS numbers are required) have been noted in section 6-1.

A procedure for instances when data cannot be provided via AIS has been specified.

Controlled chemical substances listed in the third edition are now listed in Table 6, List of Chemical Substances Subject to Survey, under section 6-1-3(4) to be used as a reference when completing an AIS.

Types of data suppliers are requested to submit are listed in Table 4, Types, Requirements and Formats of Data to Be

Submitted. Table 10 provided in the third edition now appears as a section of Table 4 under the heading of “Data to Be Submitted via Minebea-specified Forms.”

8. Section 6-3(3): Validity Period and Updating Management for Report of Analysis Results and Analysis Report

A statement has been added to specify that suppliers will be given instructions by Minebea when they cannot perform annual updates.

9. Section 6-3(5): Items that Must be Entered in Analysis Report

A requirement for a sample image has been added.

10. Section 7: Analysis Methods

Now that IEC 62321 is in effect, the section states that it must be used as a standard for analysis methods for the six substances specified in the RoHS Directive. Details of the analysis methods provided in the third edition have been deleted.

11. Analysis Methods for Substances Other than the Six Substances Specified in the RoHS Directive

Sections 9-5 through 9-10 in the third edition have been deleted since analysis laboratories and methods are specified in customer requirements and suppliers will be notified about them when necessary (see section 6-3(7)).

12. Supplementary Provisions

Supplementary provisions concerning the implementation of this Standard have been established.

Appendix Table-1: Comparative Table between Previous and Current Editions of EM10507

Previous (Third Edition)		Current (Fourth Edition)		Remarks
Section	Title	Section	Title	
	Positioning of the Standard	01	Positioning of the Standard	
	Deliberation/Determination of the Standard		Deleted	
	Basic Policy	02.	Basic Policy	
3-1	Parts and materials		Deleted	
3-2	Prohibited chemical substances		Deleted	
3-3	Controlled chemical substances (chemical substances subject to survey)		Deleted	
3-4	Inclusion	3-1	Inclusion	
3-5	Impurities	3-2	Impurities	
3-6	Allowable concentration (threshold level)	3-3	Legal Limits (Threshold Levels) and Minebea Regulatory Limits	
3-6	Allowable concentration (threshold level)	3-3	Legal Limits (Threshold Levels) and Minebea Regulatory Limits	
3-7	Homogeneous Material	3-4	Homogeneous Material	
3-8	Certificate of Non-Use of Prohibited Chemical Substance	3-5	Certificate of Non-Use of Prohibited Chemical Substance	
3-9	Report of Analysis Results	3-6	Report of Analysis Results	
3-10	Analysis Report	3-7	Analysis Report	
3-11	ISO/IEC 17025 certified body	3-8	ISO/IEC 17025 Certified Body	
		4-4	Ban on the Use of Recycled Plastics	
4-4	Chemical substances the use of which is prohibited in toys/childcare articles		Annex I	
4-5	Prohibited Chemical Substances Related to Batteries		Annex II	
5	Controlled Chemical Substances (chemical substances subject to survey)	6-1	Sharing Data on Chemical Substances Contained in Products	
6	Packaging/Packing Materials		Annex IV	
6-3	Packaging/packing materials used in delivering to the Minebea Group	8	Important Information Concerning Packaging/Packing Materials	
7	Operation	5	Operation	
7-1	Basics of operation method	5-1	Basics of Operation Method	
7-2	Upstream management	5-2	Obtaining Chemical Substance Data from Upstream Users	

Appendix Table-1: Comparative Table between Previous and Current Editions of EM10507 (continued)

7-3	Control of Changes	5-3	Control of Changes	
7-4	Occurrence of abnormalities or noncompliance	5-4	Occurrence of Abnormalities or Noncompliance	
7-5	Avoiding contamination	5-5	Avoiding Contamination	
7-6	Information disclosure	5-6	Data Sharing	
7-7	Requirements not stipulated in this Standard	5-7	Requirements Not Stipulated in This Standard	
7-8	Survey of new regulated chemical substances		Deleted	
7-9	Control of receiving inspections		Deleted	
7-10	Detailed List of Chemical Substances	5-8	Detailed List of Chemical Substances	
8	Data Requested for Submission	6	Data Requested for Submission	
8-1	Basis for submission of data	6	Data Requested for Submission	
8-2	Types of data to be submitted	6-1 through Table 4	Types, Requirements and Formats of Data to Be Submitted	
8-3	Data to be submitted and methods of response	6	Data Requested for Submission	
Table 10	Types, requirements and formats of data to be submitted	Table 4	Types, Requirements and Formats of Data to Be Submitted	
8-2-1	Certificate of Non-Use of Prohibited Chemical Substance	6-2	Certificate of Non-Use of Prohibited Chemical Substance	
8-2-2	Environmental Hazardous Substances Survey Report	6-1-5	When Data on All Constituents Cannot Be Provided via JAMP AIS	
8-2-3	Report of Analysis Results and Analysis Report	6-3	Report of Analysis Results and Analysis Report	
8-2-5	MSDS (Material Safety Data Sheet)	6-4	MSDS (Material Safety Data Sheet)	
8-2-6	Mill sheets	6-5	Mill Sheets	
8-2-4	Component List	6-6	Component List (Form-5)	
9	Analysis Methods	7	Analysis Methods	
Attachment-1	Certificate of Non-Use of Prohibited Chemical Substances	Form-2	Certificate of Non-Use of Prohibited Chemical Substances	
Attachment-A	Non-Use Certificate List	Form-3	Non-Use Certificate List	
	Sample Non-Use Certificate List	Attachment-1	Sample Non-Use Certificate List	
Attachment-2	Environmental Hazardous Substances Survey Report		Environmental Hazardous Substances Survey Report	
Attachment-3	Report of Analysis Results	Form-4	Report of Analysis Results	
	Report of Analysis Results - Sample	Attachment-2	Report of Analysis Results - Sample	
Attachment-4	Structural Diagram, Bill of Material – Entry Sample	Attachment-3	Structural Diagram, Bill of Material – Entry Sample	
Attachment-5	Component List	Form-5	Component List	
	Sample Component List	Attachment-4	Sample Component List	
Attachment-6	Sample Analysis Flowchart	Attachment-5	Sample Analysis Flowchart	
		Attachment-6	Items Exempt from EU RoHS Directive	
		Form-1	Special Requirement Form	

Appendix Table-2: Group II and Group III in the third edition have been combined into Group II in the fourth edition.

Fourth Edition Table 2: Group II			
Substance	Revision	Substance	Revision
Dibutyl tin (DBT) Diocetyl tin (DOT)	Added	Nickel	Added
2-(2'-hydroxy-3',5'-di-tert-butylphenyl) benzotriazole	Added	Dimethylfumarate (DMF)	Added
Perfluorooctane sulfonate (PFOS) C8F17SO2X (X=OH, metallic salt (O-M+), halogenide, amide, and derivatives containing other polymers)	Moved	Hexachlorobenzene (HCB)	Added
Beryllium oxide	Moved	2,4,6-tri-tert-butylphenol	Added
Phthalate esters	Moved	Mirex	Moved
Bis (2-ethylhexyl) phthalate (DEHP)	Moved	Cyclohexane	Added
Dibutyl phthalate (DBP)	Moved	Benzene	Added
Benzylbutyl phthalate (BBP)	Moved	Arsenic and its compounds	Added
Phthalate esters	Moved	Monomethyl-tetrachloro-diphenyl methane	Added
Diisononyl phthalate (DINP)	Moved	Monomethyl-dichloro-diphenyl methane Product name: Ugilec 121, Ugilec 21	Added
Diisodecyl phthalate (DIDP)	Moved	Monomethyl-dibromo-diphenyl methane (DBBT) or Bromobenzylbromotoluene (DBBT)	Added
Di-n-octyl phthalate (DNOP)	Moved	Trichlorobenzene	Added
Cobalt chloride	Added		

Deleted in the Fourth Edition (Group III in the Third Edition)

Substance	Substance
Hexachlorobenzene	Carbon tetrachloride
Aldrin	Yellow phosphor
Dieldrin	Octamethyl pyrophosphoramidate (also known as Schradan)
Endrin	Tetraalkyl lead
DDT	Diethyl paranitrophenyl thiophosphate (also known as Parathion)
Chlordane or heptachlor	Dimethylethylmercapto ethylthiophosphate (also known as Demeton-methyl)
N,N'-ditolyl-p-phenylenediamine, N-tolyl-N'-xylyl-p-phenylenediamine, or N,N'-dixylyl-p-phenylenediamine	Dimethyl-(diethylamido-1-chlorocrotonyl)-phosphate (also known as Phosphamidon)
2,4,6-tri-tert-butylphenol	Dimethylparanitrophenyl thiophosphate (also known as Parathion-methyl)
Toxaphene	Tetraethylpyrophosphate (also known as TEPP)
Kelthane or dicofol	Monofluoroacetate
Hexachloro-1,3-butadiene	Monofluoroacetamide (also known as Fluoroacetamide)
Trichloroethylene	Aluminium phosphide
Tetrachloroethylene	Hexachlorobenzene