Control Standard of

Chemical Substances in Products

Rev.001

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ROHM Co.,Ltd.

【Contents】

1. Objective

Using this guideline, ROHM group (hereinafter referred to as ROHM) will make clear the management of substances of environmental concern in the parts and materials they supply in order to prevent prohibited substances from mixing into ROHM products, and to reduce any harmful effects on natural ecosystems in compliance with relevant laws and ordinances.

2. Scope

Targets are the parts, materials, packaging components※1 and sub-materials※2 that are procured by ROHM Group（Hereinafter referred to as “Materials”）.

※1: For Packaging Materials that ROHM Group procure for deliveries to customers. Packaging materials used for transportation/protection by supplier are not applicable. However, this pertains to products that have come in direct contact with, transferred, or mixed specified prohibited substances.

※2: No delivered to the ROHM’s customers, which come in contact with products regardless of whether or not they residue in the products.（Any production facilities as well as tools and jigs shall be exempted.）

3. Definition of Terms

3.1 Chemical Substance

A chemical element or compound that either exists in nature or is obtained through a manufacturing process.

3.2 Mixture

A mixture intentionally comprising two or more chemical substances.
Examples are paints, inks, alloy ingot, solder, resin pellets, etc.

3.3 Chemicals

3.1 Chemical substance and/or mixture.

3.4 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.

3.5 Substances of environmental concern

A general term of substances considered to have a remarkable environmental impact in the health hazard to a human body and the global environment.

3.6 Environment-related Substances to be Controlled

Substances judged by ROHM considered to be had a remarkable environmental impact in the health hazard to a human body and the global environment.

3.6.1 Prohibited Substances

Restrict of use by laws and regulations or customer requirement in Environment-related Substances to be Controlled and prohibit inclusion in parts and materials procured by ROHM.

3.6.2 Controlled Substances

Manage and promote the substitution in Environment-related Substances to be Controlled by understanding actual conditions of use from laws and regulations, customer requirements and industry trends etc.

3.7 Homogeneous material

Homogeneous material means one material of uniform composition throughout or a material, consisting of a combination of materials that cannot be disjointed or separated into different materials by mechanical actions. (Ex. Plastic, ceramics, glass, metal, resin, coating agent, plating layer, painting / painting layer etc.）

3.8 Threshold level

Threshold level is defined as the maximum rate of content or content when a prohibited chemical substance is present in parts and materials.

3.9 Intentionally added

“Intentionally added” means a situation where a substance is contained in the materials because of deliberate addition filling, blending or adhesion in order to provide a specific characteristic, appearance, property, attribute or quality.

3.10 Impurity

Impurities are substances that are contained in natural material and cannot be removed by the current industrial technologies in the refining process.

3.11 IEC62321

Analysis methods for the substances specified in the EU RoHS Directive shall be based on the International Electro-technical Commission’s (IEC).

3.12 ISO/IEC17025

International Standard “General requirements for the competence of testing and calibration laboratories”.

3.13 chemSHERPA

chemSHERPA is a common scheme for information transfer across a supply chain.

3.13.1 chemSHERPA-CI

Data entry support tool to transfer composition information for chemical substances and mixtures.

3.13.2 chemSHERPA-AI

Data entry support tool to transfer composition information and compliance information of articles.

4. Commentary of Laws and Regulations

Major laws and regulations referenced to decide Environment-related Substances to be Controlled.

4.1 Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.

Law concerning the regulation of examination, manufacturing, etc. regulation of chemical substances.

4.2 Protection of the Ozone Layer Law

The Act on the Protection of the Ozone Layer Through the Control of Specified Substances and Other Measures (The Protection of the Ozone Layer Law) was enacted in 1988 in order to implement the resolutions of the Parties to the Montreal Protocol, in addition to the obligation of contracting countries specified in the Vienna Convention for the Protection of the Ozone Layer, which is the international framework for ozone layer protection, and the Montreal Protocol on Substances that Deplete the Ozone Layer.

4.3 76/769/EEC

On the approximation of the laws, regulations and administrative provisions of the Member States relating to restrictions on the marketing and use of certain dangerous substances and preparations 2006/122/EC is a law concerning the prohibition of use of PFOS by the 30th revision instructions of 76/769/ EEC. 76/769/EEC was abolished on 1 June 2009 and was unified in the REACH regulation (Annex XVII).

4.4 REACH Regulation (No 1907/2006)

Regulation regarding the registration, evaluation, approval and restriction of chemical substance which went into effect on 1 June 2007.

4.5 ELV Directive (2000/53/EC)

The “2000/53/EC” stands for the ELV Directive (End of Life Vehicles).It is a directive for reducing wastes from discarded automobiles and promoting collection and reuse of them, and recycle of their parts. The use of lead, mercury, cadmium, and hexavalent chrome is prohibited, in principle, for the automobiles to be sold after July 2003.

4.6 RoHS Directive (2011/65/EU)

The “2011/65/EC” stands for the RoHS (Restriction of the use of certain Hazardous Substances) Directive. It is an EU directive for restricting the use of certain hazardous substances for electrical and electronic equipment. It was enacted as 2003/95/EC in July 2006 with the aim of reducing the environmental load during reclamation or incineration after the use of the products and also preventing a mixture of hazardous substances into recycled materials. It was revised on 1 July 2011 and published as 2011/65/EU (commonly known as RoHS2).

4.7 POPs (Stockholm Convention on Persistent Organic Pollutants)

Stockholm Convention on Persistent Organic Pollutants is an international environmental treaty, signed in 2001 and effective from May 2004, that aims to eliminate or restrict the production and use of persistent organic pollutants (POPs). About the target substance, the member nation which has concluded treaties, such as Japan, will be regulated by a domestic statute so that each country can collateralize a treaty.

5. Request to suppliers

5.1 Green Procurement

In promoting green procurement, please submit the following documents.

No.	Types of data to be submitted	Format
1	Certificate of Nonuse of Prohibited Substances Attachment1	PDF
2	List of components Attachment2	EXCEL
3	Target Part numbers List Attachment3	PDF
4	chemSHERPA-CI (Chemical substances / Mixture)	SHCI
	chemSHERPA-AI (Article)	SHAI
5	Analysis data	PDF

	Certificate of Non-Use of Prohibited Substances	List of Component	Target Part numbers List	chem SHERPA CI/AI	Analysis data
	Attachment 1	Attachment 2	Attachment 3		
Parts / Materials constituting ROHM products	○	○	※	○	○
Packaging materials	○	○	※	○	○
Sub-materials	○	○	※	―	―

○:Need to be submitted ―: Not need to be submitted

※:Need to be submitted only when replying in series.

5.1.1 Certificate of Nonuse of Prohibited Substances Attachment 1

We ask for a proof of statement that prohibited substances are less than the threshold levels in each homogenous material.

5.1.2 List of Components Attachment 2

1) Enter the data shall be written in Japanese Language (Hiragana, Katakana). In case where the data cannot be entered in Japanese Language, those in chemical symbols shall be accepted. Enter all data in one-byte characters.
2) Please enter the data of each part number.
3) In the “Major production sites” column, describe the name of country in which is finally produced.
4) For the product weight, fill in the weight of the product to be reported and choose the weight unit (kg, g, mg).
5) In the Report of Environment-related Substances to be Controlled (Prohibited substances, Controlled substances), please indicate the presence or absence of substances in the materials and its manufacturing process. If chemical substances were contained or used, please mention the all chemical substances name.
6) Fill out all the chemical substances name contained in materials.
   - Basically, fill out the list so as not to leave cells blank (not filled).
   - If any chemical substances that may not be disclosed due to manufacturing know-how, describe “Nondisclosure” in the “Chemical Substance name” column; however, that as a rule, 90% or more of chemical substances names shall be described in each homogeneous material and nondisclosure ratio in each homogeneous material shall be less than 10% and a total weight of nondisclosure shall be not more than 10% of product weight.
   - Fill out the data of the chemical substances that comprise in each homogeneous material regardless of whether contained intentionally or unintentionally (impurities). The content of chemical substances in each homogeneous material should be 100%.

・Chemical substances unintentionally added are treated as impurities. In this case, however, described the content weight of these impurities wherever possible, if it is known. (Particularly, Prohibited substances and Controlled substances)
・Chemical substances unintentionally contained (i.e. impurities) may be described to the extent of information available.
・Describe CAS No. in a number divided into three segments by hyphens.
・Enter product weight, chemical substance weight and content (wt%) in the cell concerned to two places of decimals.
・For liquid, powder, and film materials, fill out their weight using particular weight and length (e.g.100g per 1 Meter).
・Fill out all figures in one-byte characters.

7) Describe all chemical substances in each homogeneous material for composite parts and parts.

Classification method of homogeneous materials

・Example of the composite parts

Printed Circuit Board : Base Material, Wiring, Plating, Resist inks, Silk Print Ink
Connector : Housing, Contacts(pin)
Harness : Coating Material, Core, Housing, Contacts (pin)

・Example of the parts

Surface Mounting Chip Product (e.g. capacitors) : Main body of the part, Terminal bases, Terminal plating
Semiconductor parts : Frames, Frame plating, Chip, Gold wire, Mold resin, Silver paste

8) Please choose the code of purpose for containing.

The code of purpose for containing

101:Main Component	108:Triboperformance
102:Thermal stability	109:Corrosion resistance
103:Vulcanizing agent	110:Electric characteristic
104:Dyes , Pigment	998:Impurity (unintentional presence)
105:Flame resistance	999:Others
106:Machining	-
107:Machanical Property	

9) Describe further use/non-use of recycled material in homogeneous materials.

5.1.3 Target Part numbers List　Attachment 3

1) Use the list if there are many products that the contents of “Certificate of Non-use of Prohibited Substances” and “List of Components” are identical.
2) Fill in the series product names and numbers in “Target Part numbers List”.
・Representative product name … Fill in the representative product name.
Example of Representative product name: Cu frame, Ceramic capacitor, Gold wire, ○○ series.
・Representative product number…Fill in the official name of each materials.
(Model name as registration at ROHM）
・Weight … Fill in the materials weight

5.1.4 chemSHERPA-CI / chemSHERPA-AI

Using the chemical substances in products information scheme within the supplier chain, report any and all information on products containing chemical substances.

Type of Delivery	Answer Format
Chemical Substance	chemSHERPA-CI
Mixture	
Article	chemSHERPA-AI

To correspond with updated laws and regulations, supporting tool data and substance list of chemSHERPA will be revised periodically. Please submit the coming tool data by chemSHERPA homepage. https://chemsherpa.net/

5.1.5 Analysis Data

1) Unit of analysis measurement
   Analysis reports need to be submitted in each homogeneous material constituting the materials.
2) Analysis Laboratory
   Analysis report by the ISO/IEC17025 certified laboratories is required to meet customer requirements.
3) Analysis Report Substances

		Analysis data (Refer to Attachment 4)									
		Cd	Pb	Cr^{6+}	Hg	PBB	PBDE	Phthalates (DEHP,DBP BBP,DIBP)	Halogens (F, Cl Br, I)	Sb	P
Parts / Materials constituting ROHM products	Halogen free	○	○	○	○	○	○	○	○	○	○
	Resin Plastic	○	○	○	○	○	○	○	－	－	－
	Other than the above	○	○	○	○	－	－	－	－	－	－
Packaging materials	Resin Plastic	○	○	○	○	○	○	－	－	－	－
	Other than the above	○	○	○	○	－	－	－	－	－	－
Sub-materials		－	－	－	－	－	－	－	－	－	－

(Remark) ROHM may ask suppliers for the additional analysis report by laws and regulations trend or ROHM's customer requirements.

4) Analysis Method

Substances	Polymers	Metals	Electronics
Lead/Cadmium (Pb/Cd)	IEC62321-5（2013） ICP-OES,ICP-MS,AAS,AFS		
Mercury (Hg)	IEC62321-4（2013） ICP-OES,ICP-MS,CV-AAS,CV-AFS		
Hexavalent chromium (Cr^{6+})	IEC62321-7-2（2017） Alkali decomposition / Colorimetric method	IEC62321-7-1（2015） Boiling water extraction/ Colorimetric method	IEC62321-7-2（2017） Alkali decomposition / Colorimetric method
Specific bromine-based flame retardants (PBB, PBDE)	IEC62321-6（2015） GC/MS	NA	IEC62321-6（2015） GC/MS
Phthalates (DIBP,DBP BBP, DEHP)	IEC62321-8（2017） GC/MS	NA	IEC62321-8（2017） GC/MS
Halogens (F, Cl, Br, I)	BS EN14582（2016） IC		
Antimony, Phosphorus (Sb, P)	US EPA 3050B（1996） ICP-OES		

5) Allowable concentration
   Shall meet the threshold levels of “6. Environment-related Substances to be Controlled”.
6) In the case of the same specification (Maker, Part number, Substances of environmental concern), the analysis report of a representative plant is acceptable.
7) Validity period for analysis report
   The effective period of analysis report issued by analysis laboratories is one year from the date of measurement. We may ask you to provide annual updates.
8) Analysis report
   Please enter the following items in the analysis report.
   ① Pretreatment method: Official method name or name of the method if different from the official method.
   ② Measurement method: Measurement method name or official method name.
   ③ Name of analysis laboratory, corporate seal, name and signatures of a responsible person at the analysis laboratory and a person who performed measurements.
   ④ Date of issue, date of measurement
   ⑤ Measurement results（If in the event of N.D.(Not Detectable), the minimum limit value of determination is also needed.）
   ⑥ Analysis Flow chart: The description method is entrusted to each one of the analysis laboratory. In principle, sample preparation, decomposition, filtration, dissolution, and other processes shall be stated, and at least the kind of reagents shall be entered in the flow chart.

6. Environment-related Substances to be Controlled

No.	Substance	CAS No.	Management classification	Scope	Threshold levels
1	Polychlorinated biphenyls (PCB)	-	Prohibit	All application	Intentionally added
2	Polychlorinated naphtalenes (PCN)	-	Prohibit	All application	Intentionally added
3	Polychlorinated terphenyls (PCT)	61788-33-8	Prohibit	All application	Less than 50ppm
4	Trisubstituted organostannic compounds including tributyltin(TBT)conpounds and triphenytin(TPT)compounds)	56-35-9	Prohibit	All application	Less than 1000ppm (Tin)
5	Dibutyltin (DBT) compounds	-	Prohibit	All application	Less than 1000ppm (Tin)
6	Dioctyltin (DOT) compounds	-	Prohibit	・Textile articles and leather products intended to come into contact with the skin ・Childcare articles ・Two-component room temputature vulcanisation moulding kits (RTV-2moulding kits)	Less than 1000ppm (Tin)
7	2-(2H-1,2,3-benzotriazol-2-yl)-4,6-di-tert-butylphenol	3846-71-7	Prohibit	All application	Intentionally added or less than 1000ppm
8	Hexabromocyclododecane(HBCD) and all major Diastereoisomers	25637-99-4 3194-55-6 4736-49-6 65701-47-5 134237-50-6 134237-51-7 134237-52-8 138257-17-7 138257-18-8 138257-19-9 169102-57-2 678970-15-5 678970-16-6 678970-17-7	Prohibit	All application	Intentionally added or less than 100ppm
9	Cadmium and its compounds	-	Prohibit	Other than the controlled substances	less than 100ppm
			Control	The latest version of RoHS AnnexIII/Ⅳ	
10	Lead and its compounds	-	Prohibit	Electric wire, cable, cord	Less than 300ppm in surface coating material
				Other than the above	Less than 1000ppm
			Control	The latest version of RoHS Annex III/Ⅳ	-
11	Hexavalent chromium compounds	-	Prohibit	Other than the controlled substances	Less than 1000ppm
			Control	The latest version of RoHS Annex III/Ⅳ	-
12	Mecury and its compounds	-	Prohibit	Other than the controlled substances	Less than 1000ppm
			Control	The latest version of RoHS Annex III/Ⅳ	-
13	Four heavy metals (Cadmium, Lead, Hexavalent chromium and Mercury) Sum of 4 substances	-	Prohibit	Packaging materials for shipment	Intentionally added and sum less than 100ppm
14	Polybrominated biphenyls (PBB)	-	Prohibit	All application	Less than 1000ppm
15	Polybrominated diphenyl ethers (PBDE)	-	Prohibit	All application	Less than 1000ppm

RoHS Annex III/Ⅳ Exemption list
http://ec.europa.eu/environment/waste/rohs_eee/legis_en.htm
http://ec.europa.eu/environment/waste/rohs_eee/adaptation_en.htm

No.	Substance	CAS No.	Management classification	Scope	Threshold levels
16	Specific phthalates				
	Diethylhexyl phthalate (DEHP)	117-81-7	Prohibit	All application	Less than 1000ppm
	Dibutyl phthalate (DBP)	84-74-2	Prohibit	All application	Less than 1000ppm
	Butyl benzyl phthalate (BBP)	85-68-7	Prohibit	All application	Less than 1000ppm
	Specific phthalates Group 1 (DEHP, DBP, BBP)	117-81-7 84-74-2 85-68-7	Prohibit	Toy , child care products	Sum : Less than 1000ppm
	Diisononyl phthalate (DINP)	28553-12-0 68515-48-0	Prohibit	All application	Less than 1000ppm
	Diisodecyl phthalate (DIDP)	26761-40-0 68515-49-1	Prohibit	All application	Less than 1000ppm
	Di-n-octyl phthalate (DNOP)	117-84-0	Prohibit	All application	Less than 1000ppm
	Specific phthalates Group 2 (DINP, DIDP, DNOP)	28553-12-0 68515-48-0 26761-40-0 68515-49-1 117-84-0	Prohibit	Children's toy that can be placed in a child's mouth or child care products	Sum : Less than 1000ppm
	Diisobutyl phthalate (DIBP)	84-69-5	Prohibit	All application	Less than 1000ppm
	Specific phthalates other than the above		Control	All application	Less than 1000ppm
17	PFOS（Perfluorooctane sulfonate) and its salt, and PFOSF (Perfluorooctanesulphonyl fluoride)	-	Prohibit	All application	Intentionally added Impurity：Less than 1000ppm coated material：＜1μg/㎡
18	PFOA (Perfluorooctanoic acid) and individual salts and esters of PFOA	-	Prohibit	All application	Material : Less than 1μｇ/㎡ Material of part : Less than 1000ppm
19	Dimethylfumarate (DMF) alias : Dimethyl Fumarate	624-49-7	Prohibit	All application	Less than 1000ppm
20	Shortchain Chlorinated Paraffins (C10-13) (SCCP)	-	Prohibit	All application	Intentionally added or less than 1000ppm of article
21	Medium Chlorinated Paraffins (C14-17) (MCCP)	-	Prohibit	All application	Intentionally added or less than 1000ppm of article
22	Arsenic and its compounds	-	Prohibit	Other than the controlled substances	Less than 1000ppm
			Control	・Compound semiconductor ・Dopants for semiconductor ・Copper foil of printed wiring board	-
23	Nickel and its compounds	-	Prohibit	Prolonged contact with the skin	0.28μg/cm2/week
			Control	Other than the above	
24	Asbestos	-	Prohibit	All application	Intentionally added
25	Azocolourants and azodyes which form certain aromatic amine（Refer to Table.1）	-	Prohibit	All application	Less than 30ppm
26	Cobalt Chloride	7646-79-9	Prohibit	Indicator in a drying agent	Less than 1000ppm
27	Ozone depleting substances (Montreal Protocol A, B, C, E Substances)　(Refer to Table.3)	-	Prohibit	All application	Intentionally added
28	Antimony and its compounds				
	Antimony trioxide	1309-64-4	Prohibit	Materials specified as halogen free	Less than 1000ppm
	Other than the above	-	Control	Other than the prohibited substances	-
29	Beryllium and its compounds				
	Beryllium oxide	1304-56-9	Prohibit	All application	Less than 1000ppm
	Other than the above	-	Control	Other than the prohibited substances	-
30	Bisphenol A	80-05-7	Prohibit	Thermal paper	Non use
			Control	Other than the prohibited substances	-

No.	Substance	CAS No.	Management classification	Scope	Threshold levels
31	Tris(1-chloro-2-propyl) phosphate (TCPP)	13674-84-5	Prohibit	All application	Less than 1000ppm
32	Tris(1,3-dichloro-2-propyl)phosphate (TDCPP)	13674-87-8	Prohibit	All application	Less than 1000ppm
33	Tris(2-chloroethyl) phosphate (TCEP)	115-96-8	Prohibit	All application	Less than 1000ppm
34	Polyvinyl chloride (PVC) and its mixtures	-	Prohibit	Other than the controlled substances	Less than 1000ppm
			Control	・Wafer processing film ・Cable ・Heat shrinkable tube ・FFC ・Resin binder	-
35	Phosphorus and its compounds				
	Red phosphorus Flame Retardants	-	Prohibit	All application	Intentionally added
	Other than the above	-	Control	All application	-
36	Chlorinated Flame Retardants	-	Prohibit	All application	Less than 900ppm (Cl)
37	Brominated Flame Retardants	-	Prohibit	Material specified as halogen free	Less than 900ppm (Bl) Less than 1500ppm (Cl+Br)
			Control	Other than the prohibited substances	-
38	Benzene	71-43-2	Prohibit	Material for manufacturing processes (Cleaning agents, Degreasers, Demolder solution)	Intentionally added
			Control	Other than the prohibited substances	-
39	Normal-hexane (N-hexane)	110-54-3	Prohibit	Material for manufacturing processes (Cleaning agents, Degreasers, Demolder solution)	Intentionally added
			Control	Other than the prohibited substances	-
40	N-Methyl-2-pyrrolidone (NMP)	872-50-4	Prohibit	Material for manufacturing processes (Cleaning agents, Degreasers, Demolder solution))	Intentionally added
			Control	Other than the prohibited substances	-
41	Toluene	108-88-3	Prohibit	Material for manufacturing processes (Cleaning agents, Degreasers, Demolder solution)	Intentionally added
			Control	Other than the prohibited substances	-
42	Perchlorates (PCA)	-	Control	All application	-
43	Polycyclic aromatic hydrocarbon(PAH) (Refer toTable.2)	-	Control	All application	-
44	Tetrabromobisphenol A (TBBPA)	79-94-7	Control	All application	-
45	Bismuth and its compounds	-	Control	All application	-
46	Siloxiane	-	Control	All application	-
47	Formaldehyde	50-00-0	Control	All application	-
48	REACH Regulation Candidate list of SVHC	-	Control	All application	-
49	Fluorinated greenhouse gases (PFC, SF6, SF4 etc.)	-	Control	All application	-
50	Other chlorine compounds	-	Control	All application	-
51	Other bromine compounds	-	Control	All application	-

Table 1. List of Amine, which shall not be generated by the decomposition of Azo compound

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

Table 2. Polycyclic aromatic hydrocarbon (PAH)

No.	Substance	CAS No.
1	Benzo[a]pyrene (BaP)	50-32-8
2	Benzo[e]pyrene (BeP)	192-97-2
3	Benzo[a]anthracene (BaA)	56-55-3
4	Chrysen (CHR)	218-01-9
5	Benzo[b]fluoranthene (BbFA)	205-99-2
6	Benzo[j]fluoranthene (BjFA)	205-82-3
7	Benzo[k]fluoranthene (BkFA)	207-08-9
8	Dibenzo[a,h]anthracene(DBAhA)	53-70-3

Table 3. Ozone depleting substances

	Name	Motoreal Protocol	Substance	Alias	Molecular formula	CAS No.
Class1	CFC	Annex A Group I	Trichlorofluoromethane	CFC-11	CFCl3	75-69-4
			Dichlorodifluoromethane	CFC-12	CF2Cl2	75-71-8
			Trichlorotrifluoroethane	CFC-113	C2F3Cl3	26523-64-8
			Dichlorotetrafluoroethane	CFC-114	C2F4C2	1320-37-2
			Monochloropentafluoroethane	CFC-115	C2F5C7	76-15-3
	Halon	Annex A Group II	Bromochlorodifluoromethane	Halon-1211	CF2BrCl	353-59-3
			Bromotrifluoromethane	Halon-1301	CF3Br	75-63-8
			Dibromotetrafluoroethane	Halon-2402	C2F4Br2	25497-30-7
	Other CFC	Annex B Group I	Chlorotrifluoromethane	CFC-13	CF3Cl	75-72-9
			Pentachlorofluoroethane	CFC-111	C2FCl5	354-56-3
			Tetrachlorodifluoroethane	CFC-112	C2F2Cl4	28605-74-5
			Heptachlorofluoropropane	CFC-211	C3FCl7	-
			Hexachlorodifluoropropane	CFC-212	C3F2CL6	3182-26-1
			Pentachlorotrifluoropropane	CFC-213	C3F3Cl5	134237-31-3
			Tetrachlorotetrafluoropropane	CFC-214	C3F4Cl4	29255-31-0
			Trichloropentafluoropropane	CFC-215	C3F5Cl3	1599-41-3
			Dichlorohexafluoropropane	CFC-216	C3F6Cl2	42560-98-5
			Chloroheptafluoropropane	CFC-217	C3F7Cl	-
	Carbon tetraohloride	Annex B Group II	Carbon tetraohloride	-	CCl4	56-23-5
	1,1,1-Trichloroethane	Annex B Group III	1,1,1-Trichloroethane	-	C2H3Cl3	71-55-6
	Chlorobromomethane	Annex C Group III	Chlorobromomethane	-	CH2BrCl	74-97-5
	Methylbromide	Annex E	Methylbromide	-	CH3Br	74-83-9
	HBFC	Annex C Group II	Dibromofluoromethane	-	CHFBr2	1863-53-7
			Bromodifluoromethane	HBFC-22B1	CHF2Br	1511-62-2
			Bromofluoromethane	-	CH2FBr	373-52-4
			Tetrabromofluoroethane	-	C2HFBr4	-
			Tribromodlfluoroethane	-	C2HF2Br3	-
			Dibromotrlfluoroethane	-	C2HF3Br2	-
			Bromotetrafluoroethane	-	C2HF4Br	124-72-1
			Tribromofluoroethane	-	C2H2FBr3	-
			Dibromodlfuoroethane	-	C2H2F2Br2	-
			Bromotrifluoroethane	-	C2H2F3Br	421-06-7
			Dibromofluoroethane	-	C2H3FBr2	358-97-4
			Bromodifluoroethane	-	C2H3F2Br	359-07-9
			Bromofluoroethane	-	C2H4FBr	762-49-2
			Hexabromofluoropropane	-	C3HFBr6	-
			Pentabromodifluoropropane	-	C3HF2Br5	-
			Tetrabromotrifluoropropane	-	C3HF3Br4	-
			Tribromotetrafluoropropane	-	C3HF4Br3	-
			Dibromopentafluoropropane	-	C3HF5Br2	-
			Bromohexafluoropropane	-	C3HF6Br	2252-78-0
			Pentabromofluoropropane	-	C3H2FBr5	-
			Tetrabromodifluoropropane	-	C3H2F2Br4	-
			Tribromotrlfluoropropane	-	C3H2F3Br3	-
			Dibromotetrafluoropropane	-	C3H2F4Br2	-
			Bromopentafluoropropane	-	C3H2F5Br	-
			Tetrabromofluoropropane	-	C3H3FBr4	-
			Tribromodlfluoropropane	-	C3H3F2Br3	-
			Dibromotrlfluoropropane	-	C3H3F3Br2	-
			Bromotetrafluoropropane	-	C3H3F4Br	-
			Tribromofluoropropane	-	C3H4FBr3	-
			Dibromodifuuoropropane	-	C3H4F2Br2	-
			Bromotrifluoropropane	-	C3H4F3Br	-
			Dibromofluoropropane	-	C3H5FBr2	-
			Bromodlfluoropropane	-	C3H5F2Br	-
			Bromofluoropropane	-	C3H6FBr	-

Class	Name	Motoreal Protocol	Substance	Alias	Molecular formula	CAS No.
Class2	HCFC	Annex C Group I	Dichlorofluoromethane	HCFC-21	CHFCl2	75-43-4
			Monochlorodifluoromethane	HCFC-22	CHF2Cl	75-45-6
			Monochlorofluoromethane	HCFC-31	CH2FCl	596-70-4
			Tetrachlorofluoroethane	HCFC-121	C2HFCl4	134237-32-4
			Trichlorodifluoroethane	HCFC-122	C2HF2Cl3	354-15-4
			Dichlorotrifluoroethane	HCFC-123	C2HF3Cl2	34077-87-7
			2,2-Dichloro-1,1,1-trifluoroethane	HCFC-123	CHCl2CF3	306-83-2
			Monochlorotetrafluoroethane	HCFC-124	C2HF4Cl	63938-10-3
			2-Chloro-1,1,1,2-tetrafluoroethane	HCFC-124	CHFClCF3	2837-89-0
			Trichlorofluoroethane	HCFC-131	C2H2FCl3	134237-34-6
			Dichlorodifluoroethane	HCFC-132	C2H2F2Cl2	25915-78-0
			Monochlorotrifluoroethane	HCFC-133	C2H2F3Cl	1330-45-6
			Dichlorofluoroethane	HCFC-141	C2H3FCl2	25167-88-8
			1,1-Dichloro-2,2,2-trifluoroethane	HCFC-141b	CH3CFCl2	1717-00-6
			Chlorodifluoroethane	HCFC-142	C2H3F2Cl	25497-29-4
			1-Chloro-1,1-difluoroethane	HCFC-142	CH3CF2Cl	75-68-3
			Chlorofluoroethane	HCFC-151	C2H4FCl	110587-14-9
			Hexachlorofluoropropane	HCFC-221	C3HFCl6	134237-35-7
			Pentachlorodifluoropropane	HCFC-222	C3HF2Cl5	134237-36-8
			Tetrachlorotrifluoropropane	HCFC-223	C3HF3Cl4	134237-37-9
			Trichlorotetrafluoropropane	HCFC-224	C2HF4Cl3	134237-38-0
			Dichloropentafluoropropane	HCFC-225	C3HF5Cl2	127564-92-5
			Dichloropentafluoropropane	HCFC-225ca	CF3CF2CHCl2	422-56-0
			Dichloropentafluoropropane	HCFC-225cb	CF2ClCF2CHClF	507-55-1
			Monochlorohexafluoropropane	HCFC-226	C3HF6Cl	134308-72-8
			Pentachlorofluoropropane	HCFC-231	C3H2FCl5	134190-48-0
			Tetrachlorodifluoropropane	HCFC-232	C3H2F2Cl4	134237-39-1
			Trichlorotrifluoropropane	HCFC-233	C3H2F2Cl3	134237-40-4
			Dichlorotetrafluoropropane	HCFC-234	C3H2F4Cl2	127564-83-4
			Monochloropentafluoropropane	HCFC-235	C3H2F5Cl	134237-41-5
			Tetrachlorofluoropropane	HCFC-241	C3H3FCl4	134190-49-1
			Trichlorodifluoropropane	HCFC-242	C3H3F2Cl3	134237-42-6
			Dichlorotrifluoropropane	HCFC-243	C3H3F3Cl2	134237-43-7
			Monochlorotetrafluoropropane	HCFC-244	C3H3F4Cl	134190-50-4
			Monochlorotetrafluoropropane	HCFC-251	C3H4FCl3	134190-51-5
			Dichlorodifluoropropane	HCFC-252	C3H4F2Cl2	134190-52-6
			Monochlorotrifluoropropane	HCFC-253	C3H4F3Cl	134237-44-8
			Dichlorofluoropropane	HCFC-261	C3H5FCl2	134237-45-9
			Monochlorodifluoropropane	HCFC-262	C3H5F2Cl	134190-53-7
			Monochlorofluoropropane	HCFC-271	C3H6FCl	134190-54-8

7. History and Content of Revisions

Rev.No	Date	**Revision Contents**
Rev.001	1 Nov 2018	Document Release Requirements related to the management of chemical substances in products were separated independently from the Green Procurement Guideline and enacted as the Control Standard of Chemical Substances in Products.

Attachment 1　Certificate of Non-use of Prohibited Substances

To: ROHM Co., Ltd.　　Date: _____

Certificate of Non-Use of Prohibited Substances

Corporate Seal

Company Name: _____
Address: _____
Sect./Dept.: _____
Responsible person (Position): _____
Person in charge (Position): _____
TEL: _____
E-mail: _____

Manufacturer name: _____
Sect./Dept.: _____
Responsible person (Position): _____
TEL: _____

We and our group companies hereby certify that the following parts / materials to be delivered to ROHM including its group companies are less than the threshold levels of prohibited substances cited in "Control Standard of Chemical Substances in Products Rev.001" in homogeneous materials.

≪ Target parts / materials≫

Product name: _____

Product number: _____

End

Attachment 2　List of components

To: ROHM Co., Ltd.　　　　　　　　　　　　　　　　Date: ____________________

List of Component

Company Name: ____________________
Address: ____________________
Sect./Dept.: ____________________
Responsible person (Position): ____________________
Person in charge (Position): ____________________
TEL: ____________________
E-mail: ____________________

Manufacturer name: ____________________
Sect./Dept.: ____________________
Responsible person (Position): ____________________
TEL: ____________________

Product name: ____________________
Product number: ____________________
Product weight: ____________________
Major production sites: ____________________

≪Report of Environment-related Substances to be Controlled≫

	Inclusion of parts and materials	Chemical substance name	Use in manufacturing process	Chemical substance name
Prohibited substances:				
Controlled substances:				

≪List of Component≫

Homogeneous material	Raw material maker	Chemical substance name	CAS No.	Weight	Unit	Content (wt%)	Purpose of inclusion/intended use	Recycled material

Attachment 2　List of Components Entering Example

■Ex.1：Lead frame

Product name:	Lead frame	
Product number:	A-003	
Product weight:	130.00	mg
Major production sites:		Japan/Malaysia

≪Report of Environment-related Substances to be Controlled≫

	Inclusion of Parts and Materials	Chemical substance name	Use in manufacturing process	Chemical substance name
Prohibited Substances:	0.Not contained		0.Not used	
Controlled Substances:	0.Not contained		0.Not used	

≪List of Component≫

Homogeneous material	Raw material maker	Chemical substance name	CAS No.	Weight	Unit	Content (wt%)	Purpose of inclusion/intended use	Recycled material
Base Material	○○Steel	Copper	7440-50-8	129.77	mg	99.84	101:Main Component	0.Not used
		Iron	7439-89-6	0.097	mg	0.075	107:Machanical Property	0.Not used
		Phosphorus	7723-14-0	0.11	mg	0.085	107:Machanical Property	0.Not used
Plating	○○Chemicals	Copper	7440-50-8	0.020	mg	100.00	101:Main Component	0.Not used

■Ex.2：Printed Circuit Board

Product name:	Printed Circuit Board	
Product number:	C-101	
Product weight:	110.03	g
Major production sites:		Japan/Malaysia

≪Report of Environment-related Substances to be Controlled≫

	Inclusion of Parts and Materials	Chemical substance name	Use in manufacturing process	Chemical substance name
Prohibited Substances:	1.Contained	Brominated Flame Retardant (designated substance)	0.Not used	
Controlled Substances:	0.Not contained		1.Used	2-Methoxyethanol

≪List of Component≫

Homogeneous material	Raw material maker	Chemical substance name	CAS No.	Weight	Unit	Content (wt%)	Purpose of inclusion/intended use	Recycled material
Base Material	○○Chemicals	Epoxy Resin	29690-82-2	19.76	g	25.00	101:Main Component	0.Not used
		Glass cloth	65997-17-3	57.71	g	73.01	101:Main Component	0.Not used
		Tributhyl phosphate	126-73-8	1.57	g	1.99	101:Main Component	0.Not used
Wiring	Nondisclosure	Copper	7440-50-8	15.28	g	99.64	101:Main Component	0.Not used
		Lead	7439-92-1	0.055	g	0.36	998:Impurity(unintentional presence)	0.Not used
Ink	○○Ink	Tributhyl phosphate	126-73-8	15.13	g	98.73	101:Main Component	0.Not used
		Carbon black	1333-86-4	0.13	g	0.85	104:Dyes , Pigment	0.Not used
		Nondisclosure	―	0.065	g	0.42	106:Machining	0.Not used
Plating	○×Chemicals	Gold	7440-57-5	0.33	g	100.00	101:Main Component	0.Not used

■Ex.3：Mold Resin

Product name:	Mold Resin	
Product number:	D-202	
Product weight:	4.75	g
Major production sites:		Japan/Malaysia

≪Report of Environment-related Substances to be Controlled≫

	Inclusion of Parts and Materials	Chemical substance name	Use in manufacturing process	Chemical substance name
Prohibited Substances:	0.Not contained		0.Not used	
Controlled Substances:	0.Not contained		0.Not used	

≪List of Component≫

Homogeneous material	Raw material maker	Chemical substance name	CAS No.	Weight	Unit	Content (wt%)	Purpose of inclusion/intended use	Recycled material
Base compound	○○Chemicals	Epoxy resin	29690-82-2	0.67	g	59.82	101:Main Component	0.Not used
		Phenol novolak	9003-35-4	0.45	g	40.18	101:Main Component	0.Not used
Flame retardant	○○Chemicals	Metal hydroxide	21645-51-2	0.16	g	70.80	105:Flame resistance	0.Not used
		Organic phosphorus compounds	-	0.066	g	29.20	105:Flame resistance	0.Not used
additive agent	○△Chemicals	Carbon black	1333-86-4	0.034	g	100.00	104:Dyes , Pigment	0.Not used
Filler	○○Chemicals	Silica (amorphous)	60676-86-0	3.37	g	100.00	102:Thermal stability	0.Not used

■Ex.4：Cardboard box

Product name:	Cardboard box	
Product number:	AB-1	
Product weight:	1.25	kg
Major production sites:		Japan/Malaysia

≪Report of Environment-related Substances to be Controlled≫

	Inclusion of Parts and Materials	Chemical substance name	Use in manufacturing process	Chemical substance name
Prohibited Substances:	0.Not contained		0.Not used	
Controlled Substances:	0.Not contained		0.Not used	

≪List of Component≫

Homogeneous material	Raw material maker	Chemical substance name	CAS No.	Weight	Unit	Content (wt%)	Purpose of inclusion/intended use	Recycled material
Outer liner	○○Paper Mfg.	-	-	C5（160g/㎡）	-	-	-	1.Used
Core	○○Paper Mfg.	-	-	SCP（160g/㎡）	-	-	-	1.Used
Back liner	○○Paper Mfg.	-	-	C5（160g/㎡）	-	-	-	1.Used
Ink	○○Ink	Tributhyl phosphate	126-73-8	0.17	-	85.00	-	1.Used
		Carbon black	1333-86-4	0.010	-	5.00	-	1.Used
		Nondisclosure	―	0.020	-	10.00	-	1.Used

Attachment 3　Target Part numbers List

To: ROHM Co., Ltd.　　Date: _____

Target Part numbers List

Corporate Seal

Company Name: _____
Address: _____
Sect./Dept.: _____
Responsible person (Position): _____
Person in charge (Position): _____
TEL: _____
E-mail: _____

Manufacturer name: _____
Sect./Dept.: _____
Responsible person (Position): _____
TEL: _____

Representative product name: _____

Representative product number: _____

We hereby certify that the following product names and numbers are identical with the contents of Certificate of Non-Use of Prohibited Substances of representative product name and number and chemical substances in constituent materials are also identical.

Note

No.	Product name	Product number	Product weight	Unit
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

Attachment 4　Scope of Substances of environmental concern Survey

Examples of Applications of Substances of environmental concern Survey

1. Parts and Materials constituting products

Materials name		Certificate of Non-Use Prohibited Substance	List of Component	chem SHERPA CI/ AI	*Analysis Data		Target substances of analysis									
							Cd	Pb	Cr^{6+}	Hg	PBB	PBDE	Phthalates	Halogens	Sb	P
Resin materials	Protective resin															
	・Halogen free material	○	○	○	○		○	○	○	○	○	○	○	○	○	○
	・Mold resin ・Epoxy resin	○	○	○	○		○	○	○	○	○	○	○	-	-	-
	Films, tapes ・Polyimide ・Polyester	○	○	○	○		○	○	○	○	○	○	○	-	-	-
	Pastes ・Silver,Carbon ・Silicone ・Polyimide	○	○	○	○		○	○	○	○	○	○	○	-	-	-
Metal materials	Wire ・Gold,Aluminum,Copper	○	○	○	○		○	○	○	○	-	-	-	-	-	-
	Metal sheet ・Leadframe ・Plated frame	○	○	○	○		○	○	○	○	-	-	-	-	-	-
	Tantalums ・Powder, Sintered object,Wire	○	○	○	○		○	○	○	○	-	-	-	-	-	-
Inorganic materials	Ceramics ・Ceramic substrate	○	○	○	○		○	○	○	○	-	-	-	-	-	-
	Glasses ・Liquid crystal glass ・Glass tube	○	○	○	○		○	○	○	○	-	-	-	-	-	-
Electronic parts, Composite parts	Semiconductor, Passive components ・IC,Condenser Circuit board ・PWB Cable,Electrical wire, Connecting parts ・FPC,FFC ・Covered wires ・Connector	○	○	○	○	Resin	○	○	○	○	○	○	○	-	-	-
						Except resin	○	○	○	○	-	-	-	-	-	-
Semiconductor element materials	Resin ・Polyimide	○	○	○	○		○	○	○	○	○	○	○			
	Metal,Inorganic ・Wafer ・Target ・Material gas	○	○	○	○		○	○	○	○	-	-	-	-	-	-
Plating materials	・Plating solution ・Tin ball ・Nickel ball	○	○	○	○		○	○	○	○	-	-	-	-	-	-

2. Packaging Materials

Material name		Certificate of Non-Use Prohibited Substance	List of Component	chem SHERPA CI/ AI	*Analysis Data		Target substances of analysis									
							Cd	Pb	Cr^{6+}	Hg	PBB	PBDE	Phthalates	Halogens	Sb	P
Resin materials	Plastic reel	○	○	○	○		○	○	○	○	○	○	-	-	-	-
	Tube, Tube stopper	○	○	○	○		○	○	○	○	○	○	-	-	-	-
	Top tape	○	○	○	○		○	○	○	○	○	○	-	-	-	-
	Emboss tape	○	○	○	○		○	○	○	○	○	○	-	-	-	-
	Dicing tape	○	○	○	○		○	○	○	○	○	○	-	-	-	-
	Tray	○	○	○	○		○	○	○	○	○	○	-	-	-	-
	Protection film	○	○	○	○		○	○	○	○	○	○	-	-	-	-
	Case	○	○	○	○		○	○	○	○	○	○	-	-	-	-
Paper materials	Tape,Label Package box,Cardboard box	○	○	○	○	Ink part	○	○	○	○	○	○	-	-	-	-
						Except ink part	○	○	○	○	-	-	-	-	-	-
Composite parts	Blister bag	○	○	○	○	Resin	○	○	○	○	○	○	-	-	-	-
						Except resin	○	○	○	○	-	-	-	-	-	-

The materials Listed in the table below are different documents of the submission.

Material name		Certificate of Non-Use Prohibited Substance	List of Component	chem SHERPA CI/ AI	*Analysis Data	Target substances of analysis									
						Cd	Pb	Cr^{6+}	Hg	PBB	PBDE	Phthalates	Halogens	Sb	P
Resin materials	Wafer Case	○	○ (Free format)	×	○	○	○	○	○	○	○	-	-	-	-
Display materials	Felt pen,Ball-point pen Ink cartridge	×	○ (Free format)	×	×	-	-	-	-	-	-	-	-	-	-
	Tapes	×	○ (Free format)	×	×	-	-	-	-	-	-	-	-	-	-

3. Sub-Materials

Material name		Certificate of Non-Use Prohibited Substance	List of Component	chem SHERPA CI/ AI	*Analysis Data	Target substances of analysis									
						Cd	Pb	Cr^{6+}	Hg	PBB	PBDE	Phthalates	Halogens	Sb	P
Resin materials	Resist	○	○ (Free format)	×	×	-	-	-	-	-	-	-	-	-	-
	Dicing tape	○	○ (Free format)	×	×	-	-	-	-	-	-	-	-	-	-
	Grinding tape	○	○ (Free format)	×	×	-	-	-	-	-	-	-	-	-	-
Chemicals	Flux	○	○ (Free format)	×	×	-	-	-	-	-	-	-	-	-	-
	Cleaning solution	○	○ (Free format)	×	×	-	-	-	-	-	-	-	-	-	-
Gas	Nitrogen,Forming	○	○ (Free format)	×	×	-	-	-	-	-	-	-	-	-	-
Polishing material	Beads	○	○ (Free format)	×	×	-	-	-	-	-	-	-	-	-	-
	Slurry	○	○ (Free format)	×	×	-	-	-	-	-	-	-	-	-	-
Release agent (for mold)	Spray,Solvent	○	○ (Free format)	×	×	-	-	-	-	-	-	-	-	-	-
Not in direct contact with product		○	○ (Free format)	×	×	-	-	-	-	-	-	-	-	-	-

*Analysis Data : Need to provide the data in each homogeneous material.
Need to provide the both data of plating film and base material for plated parts.