

Management Standards for Environment-Related Substances

Ver.13.0

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Dexerials Corporation

Regarding the use of substances prohibited or restricted by regional or country laws and ordinances, the laws and ordinances must be observed and followed even though the substances are not designated in this Standard.

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1. Purpose

This management standard prohibits the use of environmentally controlled substances contained in products, prototypes, and parts, raw materials, and sub-materials that are produced, sold, and distributed by Dexerials (hereinafter referred to as “our company”) manufacturing sites. This Standard also clarify the substances and exemptions to be eliminated and aim for the following 1) to 3).

- 1) Compliance with laws and regulations
- 2) Prevention of contamination into products and trail products produced, sold and distributed
- 3) Conservation of the global environment and reduction of impact on ecosystems

2. Scope

- Products and prototypes are manufactured by Dexerials Group and consignment company
- Semi-finished products, parts, raw materials, secondary materials that make up the above

3. Terms and Definitions

In this Standard, terms are defined as follows

(1) Environment-related Substances to be Controlled ('Controlled Substances')

Among the substances contained in parts, materials and sub-materials, "Environment-related Substances to be Controlled ('Controlled Substances')" are those which, according to Dexerials Corporation's judgment, have significant environmental -impact on both humans and the global environment.

(2) Management levels

To manage the above-mentioned substances, the following Levels and Exemption are used:

※ If it is found that a new ‘Controlled Substances’ is contained, please report it immediately.

a) Level 1 (immediate ban)

Substances that are prohibited from being used in products, prototypes, parts, raw materials, and secondary materials

b) Level 2(Banned after the expiration date)

On the date set in each table, the substances and their applications in the respective tables shall be reclassified into Level 1.

c) Level 3

Substances whose use status is to be monitored for internal management

d) Exemption

Not subject to level 1, level 2 and level 3 because of reasons also being reflected by exemptions from laws.

(3) Contained

"Contained" means that a substance remains in parts, materials and sub-materials, or their materials because of addition, filling, blending, or adhesion, whether intended or not. When a substance is unintentionally contained in, or added to a product in a processing process, this situation is also regarded as "Contained."

(4) Intentionally added

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

(5) Part, Raw-Material, Sub-Material

"Part and Raw-Material" : those that make up our products and trial products.

"Sub-Material" : Materials that are not part of our products and trial products themselves, but are shipped with our products and trial products.

(6) Products, prototypes

1) Dexerials Group's products and trial products that are designed and manufactured by Dexerials Group for selling, lending or distributing.

2) Products and prototypes that Dexerials Group outsource either or both design and manufacture to a third party and which are sold, leased, or distributed under the Dexerials trademark.

3) Products and prototypes for which Dexerials Group are entrusted to either or both design and manufacturing by a third party.

(However, parts and materials designated by such third party are excluded.)

(7) Semi-finished Product

Processed products that constitute products and prototypes manufactured by Dexerials Group and subcontractors

(8) Homogenous material

“Homogenous material” means one material of uniform composition throughout or a material, consisting of a combination of materials, that cannot be disjoined or separated into different materials by mechanical actions, such as unscrewing, cutting, crushing, grinding and abrasive process.

(9) Article

“Article” means 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.

(10) Threshold level

“Threshold level” is a condition or a numerical value.

* Equal to or above this concentration limit is applicable.

* When threshold levels such as 'Intentionally added' and a numerical value are shown in 'threshold levels', both of them shall be satisfied.

(11) Effective date of the ban on the delivery

This indicates the date on or after which Dexerials Group won't accept the parts, materials and sub-materials specified in the corresponding columns of Table 4.

(12) Plastics defined in this Technical Standard

Plastics refer to materials and raw materials composed of synthetic high-molecular polymers in this Standard.

More specifically, "plastics" mainly mean the following articles composed of synthetic high-molecular polymers (more than molecular weight 10,000): resins, films, adhesives, adhesive tapes, molded products, products made of synthetic rubber, and plastics made from raw materials of plant origin. Note: * When a natural resin is synthesized with any one of the above articles, the synthetic substance is a plastic.

(13) Dexerials Group

Dexerials Corporation (DXJ), Dexerials Photonics Solutions Corporation (DXPS)

4. Management standards for “Environment-related substances to be controlled”

4.1 Controlled Substances

(Names of Controlled Substances covered by this Standard)

List of Controlled Substances

Management Level				Substances
1	2	3	Exemption	
<input type="radio"/>			<input type="radio"/>	Bis (2-ethylhexyl)phthalate (DEHP)
<input type="radio"/>			<input type="radio"/>	Dibutyl phthalate (DBP)
<input type="radio"/>			<input type="radio"/>	Benzyl butyl phthalate (BBP)
<input type="radio"/>			<input type="radio"/>	Diisobutyl phthalate (DIBP): Diisobutyl=phthalate
<input type="radio"/>			<input type="radio"/>	Cadmium and cadmium compounds
<input type="radio"/>			<input type="radio"/>	Lead and lead compounds
<input type="radio"/>			<input type="radio"/>	Mercury and mercury compounds
<input type="radio"/>				Chromium (VI) compounds
<input type="radio"/>				Polybrominated biphenyls (PBBs)
<input type="radio"/>				Polybrominated diphenylethers (PBDEs)
<input type="radio"/>				Hexabromocyclododecane (HBCDD)
<input type="radio"/>				Polychlorinated biphenyls (PCBs) and specific substitutes
<input type="radio"/>				Polychlorinated naphthalenes (PCNs)
<input type="radio"/>				Polychlorinated terphenyls (PCTs)
<input type="radio"/>				Alkans, C10-13 chloro (short-chain chlorinated paraffins) (SCCP)

Management Level				Substances
1	2	3	Exemption	
<input type="radio"/>				Tris(2-chloroethyl) phosphate (TCEP)
<input type="radio"/>				Tris(1-chloro-2-propyl)phosphate(TCPP)
<input type="radio"/>				Tris(1,3-dichloro-2-propyl)phosphate(TDCPP)
<input type="radio"/>				Fluorinated greenhouse gases (PFC , SF6, HFC)
<input type="radio"/>				Ozone depleting substances (ODS)
<input type="radio"/>				Perfluorooctane sulfonates (PFOS) and its derivative
<input type="radio"/>			<input type="radio"/>	Perfluorooctanoic acid (PFOA) and individual salts and esters of PFOA
<input type="radio"/>				Perfluorooctanoic acid (PFOA) related substances
<input type="radio"/>				Trisubstituted organotin compounds (TBT, TPT)
<input type="radio"/>			<input type="radio"/>	Dibutyltin (DBT) compounds
		<input type="radio"/>		Diocetyl tin (DOT) compounds
<input type="radio"/>				Beryllium oxide
<input type="radio"/>				Cobalt dichloride
		<input type="radio"/>		Nickel and Nickel compounds
<input type="radio"/>				Asbestos
		<input type="radio"/>		Di-isononyl phthalate (DINP)
		<input type="radio"/>		Di-isodecyl phthalate (DIDP)
		<input type="radio"/>		Di-n-octyl phthalate (DNOP)
		<input type="radio"/>		Formaldehyde

Management Level				Substances
1	2	3	Exemption	
<input type="radio"/>				2-benzotriazol-2-yl-4,6-di-tert-butylphenol(UV-320)
<input type="radio"/>				Dimethyl fumarate (DMF)
		<input type="radio"/>		Polycyclic aromatic hydrocarbons (PAH)
		<input type="radio"/>		Azocolourants and azodyes which form certain aromatic amines
		<input type="radio"/>		Brominated flame retardants (BFR)
		<input type="radio"/>		Chlorinated flame retardants (CFR)
		<input type="radio"/>		Di-n-hexyl phthalate (DnHP)
		<input type="radio"/>		Perchlorates
		<input type="radio"/>		Radioactive substances
<input type="radio"/>				Perfluorohexane-1- sulfonic acid (PFHxS) and its salts
<input type="radio"/>				PFHxS related substances
		<input type="radio"/>		Halogenated flame retardants (other than brominated and chlorinated flame retardants)
<input type="radio"/>				Halogenated flame retardants
<input type="radio"/>				Perfluorocarboxylic acids (C9-C14), their salts and related substances
<input type="radio"/>				Long-chain(C9-C21) perfluorocarboxylic acids (PFCAs) and its salts and related substances
		<input type="radio"/>		Perfluorohexanoic acid (PFHxA) and its salts and related substances
		<input type="radio"/>		Decabromodiphenylethane (DBDPE)
<input type="radio"/>			<input type="radio"/>	1,6,7,8,9,14,15,16,17,17,18,18- Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10] octadica-7,15-diene ("Dechlorane Plus"™)

Management Level				Substances
1	2	3	Exemption	
<input type="radio"/>				Hexachlorobenzene (HCB)
<input type="radio"/>			<input type="radio"/>	Phenol, Isopropylated Phosphate (PIP (3:1))
<input type="radio"/>				Pentachlorothiophenol (PCTP)
<input type="radio"/>			<input type="radio"/>	2,4,6-Tris (tert-butyl) phenol (TTBP)
<input type="radio"/>				Hexachlorobutadiene (HCBD)
<input type="radio"/>				Pentachlorophenol (PCP), its salts and esters
		<input type="radio"/>		Per/polyfluoroalkyl substances (PFAS) (excluding Level 1 substances such as PFOA / PFOS / PFHxS / PFCAs / LCPFCA, etc.)
		<input type="radio"/>		EU REACH Candidate List of substances of very high concern for Authorisation
<input type="radio"/>			<input type="radio"/>	Long-chain perfluoroalkyl carboxylate (LCPFACs) and perfluoroalkyl sulfonate chemicals
<input type="radio"/>				First 10 Chemical Substances Undergoing TSCA's Risk Evaluation
		<input type="radio"/>		20 High-Priority Substances Selected to Undergo TSCA's Risk Evaluation Process
		<input type="radio"/>		Polyvinyl chloride (PVC) and PVC blends Polyvinyl chloride (PVC) and PVC blends
		<input type="radio"/>	<input type="radio"/>	Substances subject to TSCA SNURs
<input type="radio"/>			<input type="radio"/>	UV-328

Table 1. Level 1 substances (immediate ban)

No.	Substance	CAS No.	Threshold levels	Exemption	Main Regulation
1	Bis (2-ethylhexyl)phthalate) (DEHP)	117-81-7	1000 ppm (0.1wt%) or more in homogeneous materials	Appendix 2	EU RoHS/REACH US California Prop 65
2	Dibutyl phthalate (DBP)	84-74-2	1000 ppm (0.1wt%) or more in homogeneous materials		EU RoHS/REACH US California Prop 65
3	Benzyl butyl phthalate (BBP)	85-68-7	1000 ppm (0.1wt%) or more in homogeneous materials		EU RoHS/REACH US California Prop 65
4	Diisobutyl phthalate (DIBP)	84-69-5	1000 ppm (0.1wt%) or more in homogeneous materials		EU RoHS/REACH US California Prop 65
5	Cadmium and cadmium compounds	—	100 ppm (0.01wt%) or more in homogeneous materials		EU RoHS/REACH US California Prop 65 Korea RoHS etc.
6	Lead and lead compounds	—	1000 ppm (0.1wt%) or more in homogeneous materials		EU RoHS/REACH US California Prop 65 Korea RoHS etc.
7	Mercury and mercury compounds	—	• Intentionally added • 1000 ppm(0.1wt%) or more in homogeneous materials		EU RoHS/REACH US California Prop 65 Korea RoHS etc.
8	Hexavalent chromium compounds	—	1000 ppm(0.1wt%) or more in homogeneous materials	—	EU RoHS/REACH US California Prop 65 Korea RoHS etc.
9	Polybrominated biphenyls (PBBS)	Appendix 1 No.1	• Intentionally added • 1000 ppm(0.1wt%) or more in homogeneous materials	—	EU RoHS

Table 1. Level 1 substances (immediate ban)

No.	Substance	CAS No.	Threshold levels	Exemption	Main Regulation
10	Polybrominated diphenylethers (PBDEs)	Appendix 1 No.2	•Intentionally added •500 ppm(0.05wt%) or more in homogeneous materials	—	EU RoHS EU POPs
11	Hexabromocyclododecane (HBCDD)	Appendix 1 No.3	•Intentionally added •100 ppm(0.01wt%) or more	—	EU REACH EU POPs
12	Polychlorinated biphenyls (PCBs) and specific substitutes	Appendix 1 No.4	Intentionally added	—	EU REACH EU POPs
13	Polychlorinated naphthalenes (PCNs)	Appendix 1 No.5	Intentionally added	—	EU REACH EU POPs
14	Polychlorinated terphenyls (PCTs)	61788-33-8	50 ppm(0.005wt%) or more	—	EU REACH
15	Alkans, C10-13, chloro (Short-Chain Chlorinated paraffins) (SCCP)	Appendix 1 No.6	•Intentionally added •10000 ppm(1wt%) or more •1500 ppm(0.15wt%) or more in article	—	EU REACH EU POPs
16	Tris(2-chloroethyl) phosphate (TCEP)	115-96-8	1000 ppm(0.1wt%) or more	—	USA D.C. Flame Retardant
17	Tris(2-chloro-2-propyl)phosphate (TCPP)	13674-84-5	1000 ppm(0.1wt%) or more	—	USA D.C. Flame Retardant
18	Tris(1,3-dichloro-2-propyl)phosphate (TDCPP)	13674-87-8	1000 ppm(0.1wt%) or more	—	USA D.C. Flame Retardant
19	Fluorinated greenhouse gases (PFC, SF6, HFC)	Appendix 1 No.7	Intentionally added	—	EU ODS/F-gas
20	Ozone depleting substances (ODS)	Appendix 1 No.8	Intentionally added	—	EU ODS/F-gas

Table 1. Level 1 substances (immediate ban)

No.	Substance	CAS No.	Threshold levels	Exemption	Main Regulation
21	Perfluorooctane sulfonates (PFOS) and its derivative	—	•Intentionally added •10 ppm(0.001wt%) or more (as the sum of PFOS)	—	EU POPs
22	Perfluorooctanoic acid (PFOA) and its salts	Appendix 1 No.9	•Intentionally added •25 ppb(0.000025wt%) or more (as the sum of PFOA and its salts)	Appendix 3	EU POPs
23	Perfluorooctanoic acid (PFOA) related substances	Appendix 1 No.10	•Intentionally added •1 ppm(0.0001wt%) or more (as one or a combination of PFOA related substances)	—	EU POPs
24	Trisubstituted organotin compounds	Appendix 1 No.11	•Intentionally added •1000 ppm(0.1wt%) or more (as a tin)	—	EU REACH
25	Dibutyltin (DBT) compounds	Appendix 1 No.12	1000 ppm(0.1wt%) or more (as a tin)	Appendix 3	EU REACH
26	Beryllium oxide	1304-56-9	1000 ppm(0.1wt%) or more	—	(Guidance) EICTA, CECED etc.
27	Cobalt dichloride	7646-79-9	Intentionally added	—	EU REACH Korea Toxic and Priority Control Substances
28	Asbestos	Appendix 1 No.14	Intentionally added	—	EU REACH
29	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	•Intentionally added •1000 ppm(0.1wt%) or more	—	EU REACH
30	Dimethyl fumarate (DMF)	624-49-7	1000 ppm(0.0001wt%) or more	—	EU REACH
31	Perfluorohexane-1-sulphonic acid (PFHxS) And its salts	—	•Intentionally added •25 ppb(0.000025wt%) or more (as the sum of PFHxS and its salts)	—	EU POPs

Table 1. Level 1 substances (immediate ban)

No.	Substance	CAS No.	Threshold levels	Exemption	Main Regulation
32	PFHxS-related substances	—	1ppm(0.0001wt%) or more (as one or a combination of PFHxS related substances)	—	EU POPs
33	Halogenated flame retardants	—	• Intentionally added • 1000ppm(0.1 wt%) or more of total halogen elements in homogeneous material (including PBBs and PBDEs)	—	EU Eco design Directive
34	Perfluorocarboxylic acids (C9-C14), their salts and related substances	—	• 25ppb(0.0000025) or more in mixtures and articles (as the sum of C9-C14 PFCAs and its salts) • 260ppb(0.000026wt%) or more (as one or a combination of C9-C14 PFCAs related substances)	—	EU REACH
35	Long-chain(C9-C21) perfluorocarboxylic acids (PFCAs) and its salts and related substances	—	Intentionally added	—	Canada Prohibition of Certain Toxic Substances Regulations
36	Hexachlorobenzene (HCB)	118-74-1	• Intentionally added • 10ppm(0.001wt%) or more	—	EU POPs
37	Phenol, Isopropylated Phosphate (PIP (3:1))	68937-41-7	Intentionally added	Appendix 3	US TSCA
38	Pentachlorothiopheol (PCTP)	133-49-3	Intentionally added	—	US TSCA
39	2,4,6-Tris (tert-butyl) phenol (TTBP)	732-26-3	Intentionally added	Appendix 3	US TSCA
40	Hexachlorobutadiene (HCBD)	87-68-3	Intentionally added	—	US TSCA
41	Pentachlorophenol (PCP) and its salts and esters	Appendix 1 No.19	5ppm(0.0005wt%) or more	—	EU POPs

Table 1. Level 1 substances (immediate ban)

No.	Substance	CAS No.	Threshold levels	Exemption	Main Regulation
42	Long-chain perfluoroalkyl carboxylate (LCPFACs) and perfluoroalkyl sulfonate chemicals	Appendix 1 No.20	Intentionally added	Appendix 3	US TSCA Canada Prohibition of Certain Toxic Substances Regulations
43	First 10 Chemical Substances Undergoing TSCA's Risk Evaluation	Appendix 1 No.21	Intentionally added	—	US TSCA
44	1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo [12.2.1.1.16.9.02,13.05,10] octadica-7,15-diene ("Dechlorane Plus"™)	13560-89-9	Intentionally added	Appendix 3	US TSCA POPs Canada Prohibition of Certain Toxic Substances Regulations Chemical Substances Control Law (Japan)
45	UV-328	25973-55-1	Intentionally added	Appendix 3	POPs Chemical Substances Control Law (Japan)

Table 2. Level 2 substances (Banned after the expiration date)

No.	Substance	CAS No.	Threshold levels	Expiration Date	Main Regulation

Table 3. Level 3 substances

No.	Substance	CAS No.	Threshold levels	Exemption	Main Regulation
1	Diocetyl tin (DOT) compounds	Appendix 1 No.13	Contained	—	EU REACH
2	Nickel and nickel compounds	—	Contained	—	EU REACH
3	Di-isononyl phthalate (DINP)	Appendix 1 No.15	Contained	—	EU REACH US California Prop 65
4	Di-isodecyl phthalate (DIDP)	Appendix 1 No.16	Contained	—	EU REACH US California Prop 65
5	Di-n-octyl phthalate (DNOP)	117-84-0	Contained	—	EU REACH
6	Formaldehyde	50-00-0	Contained	—	US TSCA Title VI EU REACH
7	Polycyclic aromatic hydrocarbons (PAH)	Appendix 1 No.17	Contained	—	EU REACH
8	Azocolourants and azodyes which form certain aromatic amines	Appendix 1 No.18	Contained	—	EU REACH
9	Brominated flame retardants (BFR)	Excluding PBBs, PBDEs and HBCDD	Contained	—	EU Eco design Directive IPC-4101 IEC 61249-2-21 JEDEC JS709
10	Chlorinated flame retardants (CFR)	Excluding TCEP, TCPP, TDCPP	Contained	—	EU Eco design Directive IPC-4101 IEC 61249-2-21 JEDEC JS709
11	Di-n-hexyl phthalate (DnHP)	84-75-3	Contained	—	EU REACH EU REACH US California Prop 65
12	Perchlorates	—	Contained	—	EU Battery Directive 2006/66/EC, Canada Products containing Mercury Regulations SOR/2014-254

Table 3. Level 3 substances

No.	Substance	CAS No.	Threshold levels	Exemption	Main Regulation
13	Radioactive substances	–	Contained	–	US NRC Regulation
14	Halogenated flame retardants (other than brominated and chlorinated flame retardants)	–	Contained	–	EU Eco design Directive
15	Perfluorohexanoic acid (PFHxA) and its salts and related substances	Appendix 1 No.22	Contained	–	EU REACH
16	Decabromodiphenylethane (DBDPE)	84852-53-9	Contained	–	US TSCA POPs Canada Prohibition of Certain Toxic Substances Regulations
17	Per/polyfluoroalkyl substances (PFAS) (excluding Level 1 substances such as PFOA / PFOS / PFHxS / PFCAs / LCPFCA, etc.)	Appendix 1 No.23	Contained	–	EU REACH US State of Maine
18	EU REACH Candidate List of substances of very high concern for Authorisation (*)	Appendix 1 No.24	Contained	–	EU REACH
19	20 High-Priority Substances Selected to Undergo TSCA's Risk Evaluation Process	Appendix 1 No.25	Contained	–	US TSCA
20	Polyvinyl chloride (PVC) and PVC blends	–	Contained	–	–
21	Substances subject to TSCA SNURs (*)	–	Contained	–	US TSCA Section 5

Note) (*) the list of applicable substances is frequently updated, so if you discover that a newly added substance is contained, please report it immediately.

Appendix 1. Examples of substances and its compounds

Note) This appendix is only some examples of substances. It does not cover all substances.

No.	Substance	CAS No.
1	Polybrominated biphenyls (PBBs)	67774-32-7
		59536-65-1
		92-86-4
		2052-07-5
		2113-57-7
		92-66-0
		59080-34-1
		40088-45-7
		56307-79-0
		36355-01-8
		36402-15-0
		55066-76-7
		59080-40-9
		59261-08-4
		60044-26-0
		67888-98-6
		67888-99-7
		69278-59-7
		77607-09-1
		82865-89-2
		82865-90-5
		82865-91-6
		84303-47-9
		84303-48-0
		93261-83-7
		119264-50-5
		119264-51-6
		119264-52-7
		119264-53-8
		120991-47-1
120991-48-2		
35194-78-6		
61288-13-9		
27753-52-2		
13654-09-6		
—		

No.	Substance	CAS No.
2	Polybrominated diphenylethers (PBDEs)	1163-19-5
		32536-52-0
		36483-60-0
		31153-30-7
		35854-94-5
		68631-49-2
		116995-33-6
		207122-15-4
		32534-81-9
		60348-60-9
		189084-65-9
		101-55-3
		2050-47-7
		49690-94-0
		40088-47-9
		5436-43-1
		93703-48-1
		103173-66-6
		68928-80-3
		116995-32-5
117948-63-7		
207122-16-5		
446255-22-7		
63936-56-1		
—		
3	Hexabromocyclododecane (HBCDD)	25637-99-4
		3194-55-6
		134237-51-7
		134237-50-6
		134237-52-8
		—

No.	Substance	CAS No.
4	olychlorinated biphenyls (PCBs) and specific substitutes	1336-36-3
		31472-83-0
		2050-68-2
		25512-42-9
		2437-79-8
		15968-05-5
		26914-33-0
		2051-24-3
		7012-37-5
		16606-02-3
		25323-68-6
		53742-07-7
		35065-28-2
		33979-03-2
		26601-64-9
		28655-71-2
		25429-29-2
		53469-21-9
27323-18-8		
76253-60-6 (specific substitutes)		
81161-70-8 (specific substitutes)		
99688-47-8 (specific substitutes)		
—		
5	Polychlorinated naphthalenes (PCNs)	70776-03-3
		1321-65-9
		1335-88-2
		1321-64-8
		2234-13-1
—		
6	Alkans, C10-13 chloro (short-chain chlorinated paraffins) (SCCP)	71011-12-6
		85535-84-8
		85536-22-7
		85681-73-8
		108171-26-2
—		

Appendix 1. Examples of substances and its compounds

Note) This appendix is only some examples of substances. It does not cover all substances.

No.	Substance	CAS No.	No.	Substance	CAS No.	No.	Substance	CAS No.
7	Fluorinated greenhouse gases (PFC,SF6,HFC)	75-46-7	10	Perfluorooctanoic acid (PFOA) related substances	PFOA-related substances are below Any related substance (including its salts and polymers) having a linear or branched perfluoroheptyl group with the formula C7F15- directly attached to another carbon atom, as one of the structural elements. Any related substance (including its salts and polymers) having a linear or branched perfluorooctyl group with the formula C8F17- as one of the structural elements. The following substances are excluded: C8F17-X, where X=F, Cl, Br C8F17-C(=O)OH,C8F17-C(=O)O-X' (where X'=any group, including salts)	12	Dibutyltin (DBT) compounds	818-08-6
		75-10-5						683-18-1
		593-53-3						77-58-7
		354-33-6						7324-74-5
		359-35-3						78-04-6
		811-97-2						1067-33-0
		430-66-0						—
		420-46-2						870-08-6
		75-37-6						3542-36-7
		431-89-0						16091-18-2
		690-39-1	26401-97-8					
		679-86-7	3648-18-8					
		138495-42-8	—					
		677-56-5	1332-21-4					
		431-63-0	132207-32-0					
		460-73-1	132207-33-1					
		406-58-6	12001-28-4					
		75-73-0	12001-29-5					
		76-16-4	12172-73-5					
		76-19-7	77536-67-5					
355-25-9	77536-68-6							
115-25-3	77536-66-4							
678-26-2	—							
355-42-0	28553-12-0							
2551-62-4	68515-48-0							
—	—							
8	Ozone depleting substances (ODS)	https://www.env.go.jp/earth/ozone/montreal_protocol.html (Ministry of the Environment Government of Japan) Substances of Annexes A, B, C, and E of Montreal Protocol	11	Trisubstituted organotin compounds	1461-23-0	15	Di-isononyl phthalate (DINP)	26761-40-0
		56-35-9			68515-49-1			
668-34-8	—							
639-58-7	50-32-8							
76-87-9	192-97-2							
1803-12-9	56-55-3							
379-52-2	218-01-9							
900-95-8	205-99-2							
18380-71-7	205-82-3							
18380-72-8	207-08-9							
47672-31-1	53-70-3							
94850-90-5	—							
7094-94-2	—							
2155-70-6	—							
6454-35-9	—							
24291-45-0	—							
1983-10-4	—							
7304-48-5	—							
31732-71-5	—							
56323-17-2	—							
56-36-0	—							
3090-36-6	—							
4782-29-0	—							
6517-25-5	—							
14275-57-1	—							
24291-45-0	—							
1461-22-9	—							
7342-38-3	—							
85409-17-2	—							
26239-64-5	—							
67772-01-4	—							
—	—							
9	Perfluorooctanoic acid (PFOA) and individual salts and esters of PFOA	335-67-1	—					
		3825-26-1	—					
		335-95-5	—					
		2395-00-8	—					
		335-93-3	—					
		335-66-0	—					
		376-27-2	—					
		3108-24-5	—					
		—	—					
		—	—					

Appendix 1. Examples of substances and its compounds

Note) This appendix is only some examples of substances. It does not cover all substances.

No.	Substance	CAS No.
18	Azocolourants and azodyes which form certain aromatic amines	92-67-1
		92-87-5
		95-69-2
		91-59-8
		97-56-3
		99-55-8
		106-47-8
		615-05-4
		101-77-9
		91-94-1
		119-90-4
		119-93-7
		838-88-0
		120-71-8
		101-14-4
		101-80-4
		139-65-1
		95-53-4
95-80-7		
137-17-7		
90-04-0		
60-09-3		
—		
19	Pentachlorophenol (PCP), its salts and esters	131-52-2
		2917-32-0
		3772-94-9
		87-86-5
		13673-51-3
		13673-53-5
		13673-54-6
		23234-97-1
		28990-85-4
		7778-73-6
—		

No.	Substance	CAS No.
20	Long-chain perfluoroalkyl carboxylate (LCPFACs) and perfluoroalkyl sulfonate chemicals	507-63-1
		678-39-7
		865-86-1
		2043-53-0
		2043-54-1
		17741-60-5
		27905-45-9
		30046-31-2
		39239-77-5
		60699-51-6
		65510-55-6
		68187-47-3
		68391-08-2
		70969-47-0
		125476-71-3
		1078712-88-5
		1078715-61-3
		CBI
Polyfluoroalkyl betaine (Generic) (Provisional)		
CBI		
Modified fluoroalkyl urethane (Generic) (Provisional)		
CBI		
Perfluorinated Polyamine (Provisional)		
—		
21	First 10 Chemical Substances Undergoing TSCA's Risk Evaluation	75-09-2
		106-94-5
		25637-99-4, 3194-55-6, 3194-57-8
		1332-21-4
		56-23-5
		123-91-1
		872-50-4
		127-18-4
		81-33-4
		79-01-6

No.	Substance	CAS No.
22	Perfluorohexanoic acid (PFHxA) and its salts and related substances	<p>Decafluorohexanoic acid (PFHxA), its salts and related substances (including polymers) (a) having a linear or branched perfluoropentyl group with the formula C5F11- directly attached to another carbon atom as one of the structural elements; (b) having a linear or branched perfluorohexyl group with the formula C6F13-.</p> <p>The following substances shall be derogated from this designation: (a) C6F14; (b) C6F13-C(=O)OH, C6F13-C(=O)O-X' or C6F13-CF2-X' (where X' = any group, including salts). (c) Any substance having a perfluoroalkyl group C6F13- directly attached to a sulphur atom.</p>
23	Per/polyfluoroalkyl substances (PFAS) (excluding Level 1 substances such as PFOA / PFOS / PFHXS / PFCAs / LCPFCA, etc.)	Fully (per) or partly (poly) fluorinated carbon chain connected to different functional groups (OECD)
24	EU REACH Candidate List of substances of very high concern for Authorisation	Substances List
25	20 High-Priority Substances Selected to Undergo TSCA's Risk Evaluation Process	106-99-0 85-68-7 84-74-2 95-50-1 106-46-7 75-34-3 107-06-2 156-60-5 78-87-5 84-61-7 117-81-7 84-69-5 106-93-4 50-00-0 1222-05-5 79-94-7 115-86-6 85-44-9 79-00-5 115-96-8

Appendix 2. EU RoHS Directive Exemptions

EU RoHS Directive Category No.	Substance	Exemption	Exemption Expiration Date
(BBP, DBP, DEHP, DIBP)	Bis (2-ethylhexyl)phthalate (DEHP) Dibutyl phthalate (DBP) enzyl butyl phthalate (BBP) Diisobutyl phthalate (DIBP)	Parts and materials not subject to EU RoHS exclusively for industrial or agricultural use, or for use exclusively in the open air, provided that no plasticized material comes into contact with human mucous membranes or into prolonged contact with human skin	—
8 (b)	Cadmium	Cadmium and its compounds in electrical contacts.	Pending
8 (b) - I		Cadmium and its compounds in electrical contacts used in: — circuit breakers, — thermal sensing controls, — thermal motor protectors (excluding hermetic thermal motor protectors), — AC switches rated at: 6 A and more at 250 V AC and more, or 12 A and more at 125 V AC and more, — DC switches rated at 20 A and more at 18 V DC and more, and — switches for use at voltage supply frequency \geq 200 Hz.	Pending
13 (b)		Cadmium and lead in filter glasses and glasses used for reflectance standards.	Pending
13 (b) - (II)		Cadmium in Striking Optical Filter Glasses of Categories 1-7 and 10 (excluding applications falling under point 39 of EU RoHS Annex)	Pending
13 (b) - (III)		Cadmium in Glazes Used for Categories 1-7 and 10 Reflectance Standards	Pending
3(a)		Mercury	Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes not exceeding (per lamp): Short length (\leq 500 mm) : not exceeding 3.5 mg per lamp
3(b)	Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes not exceeding (per lamp): Medium length (> 500 mm and \leq 1,500 mm) : not exceeding 5 mg per lamp		Feb 24, 2025
3(c)	Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes not exceeding (per lamp): Long length (> 1,500 mm) : not exceeding 13 mg per lamp		Feb 24, 2025
4(f)	Mercury in other discharge lamps for special purposes not specially mentioned in EU RoHS Annex		Sep 30, 2022
4(f)- I	Mercury in other discharge lamps for special purposes not specifically mentioned in this Annex		Feb 24, 2025
4(f)-II	Mercury in high pressure mercury vapour lamps used in projectors where an outpour \geq 2000 lumen ANSI is required		Feb 24, 2027

Appendix 2. EU RoHS Directive Exemptions

EU RoHS Directive Category No.	Substance	Exemption	Exemption Expiration Date
6(a)	Lead	Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0.35 % lead by weight	Pending
6(a)- I		Lead as an alloying element in steel for machining purposes containing up to 0,35 % lead by weight and in batch hot dip galvanised steel components containing up to 0.2 % lead by weight	
6(b)		Lead as an alloying element in aluminum containing up to 0.4 % lead by weight	
6(b) – I		Lead as an alloying element in aluminium containing up to 0.4 % lead by weight, provided it stems from lead-bearing aluminium scrap recycling	
6(b)-II		Lead as an alloying element in aluminium for machining purposes with a lead content up to 0.4 % by weight	
6(c)		Copper alloy containing up to 4 % lead by weight.	
7(a)		Lead in high melting temperature type solders (lead-based alloys containing 85 % by weight or more lead).	
7(c)- I		Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors (piezoelectronic devices) or in a glass or ceramic matrix compound	
7(c)-II		Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher	
13(a)		Lead in white glasses used for optical applications	
13(b)		Cadmium and lead in filter glasses and glasses used for reflectance standards	
13(b)- I		Lead in ion-tinted optical filter glasses of categories 1-7 and 10	
13(b)-III		Lead in glazes used for reflectance standards of categories 1-7 and 10	
15		Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages	
15(a)		Lead in solders to complete a viable electrical connection between the semiconductor die and carrier within integrated circuit flip chip packages where at least one of the following criteria applies: — a semiconductor technology node of 90 nm or larger; — a single die of 300 mm ² or larger in any semiconductor technology node; — stacked die packages with die of 300 mm ² or larger, or silicon interposers of 300 mm ² or larger.	
34		Lead in cermet-based trimmer potentiometer elements	

Appendix 3. Other regulatory exemptions

Regulation	Substance	Exemption	Exemption Expiration Date
EU POPs regulation	PFOA	Photolithography or etch processes in semiconductor manufacturing	Jul 4, 2025
EU REACH	Dibutyltin (DBT) compounds	Additives of sub-materials for parts and devices which are reused and not provided to the consume	—
		Additives of sub-materials for devices, semiconductors, and any other components (e.g. trays, magazine sticks, stoppers, reels, embossed carrier tapes)	—
		When Dexerials Group purchases dibutyl tin (DBT) compound more than 1,000ppm by tin conversion for materials ,products or the trial products (sample) which made Dexerials Group or third party's whose design and/or manufacture are outsourced to Dexerials Group does not exceed 1,000ppm by tin conversion	
TSCA	Phenol, Isopropylated Phosphate (PIP (3:1))	Lubricating oil and grease (including articles using these)	—
	2,4,6-Tris (tert-butyl) phenol (TTBP)	Article	—
	Long-chain perfluoroalkyl carboxylate (LCPFACs) and perfluoroalkyl sulfonate chemicals	Parts with surface coatings and other than materials for coating moldings	—
	Substances subject to TSCA SNURs (*)	Article	—
Chemical Substances Control Law (Japan)	UV-328	Article	—
	1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10] octadica-7,15-diene ("Dechlorane Plus"™)	Article	—

4.2 Additional rules for sub-materials for the product

Substances: Heavy metals (cadmium, lead, mercury, and hexavalent chromium)			
In addition to the provisions of Table 1, meet the following conditions based on the provisions of the law.			
Management Level	Targets	Threshold levels	Expiration Date
Level 1	<ul style="list-style-type: none"> All sub-materials (refer to Table 4) 	100 ppm (or 0.01 wt%) or more of the total-concentration of four heavy metals (cadmium, lead, mercury, and hexavalent chromium) in each part, ink, or paint that constitutes sub-materials	Immediately
Exemption	Cartons for returnable boxes owned by carriers or parts suppliers		
Sub-materials are required to be tested in accordance with the following standards.			
<p>1) First analyze total chromium content and verify that the total concentration of cadmium, lead, mercury and total chromium is less than 100 ppm. When analyzing, the same sample preparation methods as those used for cadmium and lead are applicable.</p> <p>2) If this total concentration is more than 100 ppm, verify that the sum of the cadmium, lead and mercury concentration is less than the 100 ppm limit. When the sum of the cadmium, lead and mercury concentration is less than the 100 ppm limit, analyze and confirm that no hexavalent chromium is present.</p> <p>Standards for four heavy metals measurement</p> <p>1) Sample preparation For cadmium and total chromium, follow the method listed in the column of cadmium. For lead, follow the methods listed the column of lead. For mercury, typical methods are as follows. (1) Closed system for acid decomposition method (e.g. a microwave decomposition method) (e.g. IEC 62321-5:2013, EPA 3052:1996) (2) A heating evaporation-cold-vapor mercury-atomic-absorption method (3) A wet decomposition method (e.g. Kjeldahl method) in which a decomposition flask with a reflux condenser is used to decompose mercury by sulfuric acid or nitric acid Note: In the process of sample preparation, particular attention is required to avoid mercury sublimation and precipitates must be completely dissolved by some technical means.</p> <p>2) Measurement methods Regarding the measurement of cadmium and total-chromium concentrations, follow the method listed in the column of cadmium . Regarding the measurement of lead concentrations, follow the method listed in the column of lead . Regarding the measurement of mercury concentrations, the same method as described for “cadmium and cadmium compounds” and “lead and lead compounds” is used. If low-concentration contamination is expected in advance, (ICP-AES) and ICP-MS analysis are considered appropriate.</p> <p>Standard methods for detecting hexavalent chromium: Note: Standard methods specified hereafter are applicable when total concentration of the four elements of cadmium, lead, mercury, and total chromium in sub-materials is 100 ppm or more.</p> <p>Detection methods:</p> <p>1) Sample preparation - Extraction methods such as boiling water extraction and alkaline extraction (e.g. IEC 62321 7-2:2017 , EPA 3060A)</p> <p>2) Measurement method - Ultraviolet-Visible (UV/VIS) Spectroscopy (e.g. IEC 62321 7-2:2017 , EPA 7196A)</p>			

(Note 1) Packaging parts and materials that are mainly shipped together with products manufactured by Dexerials Group, but packaging parts and materials that package parts, raw materials, and sub-materials delivered to Dexerials Group are not subject to this standard.

(Note 2) Sub-materials purchased by carriers other than Dexerials Group are not subject to this standard.

Table 4. Examples of sub-materials

Note: Do not cover all sub-materials

Sub-materials		
For products		
1	Bottle/ Syringe / Drum	
2	Carton	Including master carton and sub-master carton made from any materials.
3	Separator, Spacer	
4	Cushion	Foamed plastics or air cap
5	Protection bag, protection sheet	Such as made from foamed plastic or nonwoven fabric
6	Antistatic seat/ bag	
7	Bag	Plastic bag or paper bag
8	Tray / Stick / Magazine	
9	Paper pipe / Plastic Core / Reel	Core or reel to wind film product
10	Adhesive tape	Such as used for closing carton or poly bag, or, fixing or protection for removable component
11	Band	Such as PP band
12	Cable Ties	
13	Shrink film	
14	Desiccating agent	
15	Printing ink/ Thermal transfer ribbon	For the print / printing to labels
16	Label	Attached to the Carton, Bottle, Syringe, Drum
The thing which the manufacturer of part / raw materials / the sub-material for products wraps the part / raw materials / sub-material .		
17	Carrying handle	Including its related components
18	Frame/ Board	Wooden frame / plywood
19	Foil / Sheet / Lap	
20	Tray / Stick / Magazine	
21	Bag	Plastic bag or paper bag
22	Cushion	Foamed plastics or air cap
23	Carton	
24	Adhesive tape	Such as used for closing carton or poly bag, or, fixing or protection for removable component
25	Band	Such as PP band
26	Staple	
27	Label	Attached to the Carton, Bottle, Syringe, Drum
28	Printing ink/ Thermal transfer ribbon	For the print / printing to labels
The thing which is used on distribution		
29	Pallet(wooden / plastic)	(notice) The thing which Dexerials Group purchases is an object
30	Container	The container made of every materials to use in exports (notice) The thing which Dexerials Group purchases is an object
31	Frame/ Board	Wooden frame / plywood (notice) The thing which Dexerials Group purchases is an object
32	Carrying handle	Including its related components (notice) The thing which our company manufacturing sites purchases is an object
33	Joint	Carton joint (notice) The thing which Dexerials Group purchases is an object
34	Tab for hanging	(Note) Products purchased by Dexerials Group are targeted
35	Staple/ Metal fittings	(Note) Products purchased by Dexerials Group are targeted

5. Request for Management Standards for the Environment-Related Substances Report

If a product delivered to Dexerials Group contains Level 1 to 3 substances, please report by using Form 1 or your company's original format.

If there are any changes in the content after reporting, please report immediately.

Form 1. Management Standards for the Environment-Related Substances Report

Format 1.

Management Standards for the Environment-Related Substances Report

【Submission destination/Inquiries】
 Products Environment Section, Management System Department, Sustainability Promotion Division
 TEL : 0285-47-3216 E-MAIL : dxj-ml-seihinkankyo@dexerials.com

Please do not hesitate to contact us if you have any questions regarding the contents of the "Report" and the "Management Standards for Environment-Related Substances Ver.11.0" - information confirmation procedures, etc.

Company Name : ○○○○ Corporation _____
 Date : 20XX/X/X _____

Person in charge : △△ △△ _____
 T E L : XX-XXXX-XXXX _____
 E - M a i l : xxxxxx@xxxx.com _____

・In order to confirm the content of your response, Department in charge may contact you.
 ・If you wishes to contact you through your trading company, you do not fill out the contact information (TEL/E-mail).

Product Name	Substance	Cas No	Concentration (wt%)	Table and No.			If the substance is listed in the SVHC candidate list, please answer the part includes that substance
				Table 1 Level 1 Substance	Table 2 Level 2 Substance	Table 3 Level 3 Substance	
Ex : ABC0000	Di(2-ethylhexyl) Phthalate	117-81-7	0.10%	No.1			
Ex : ABC0000	Bisphenol A	80-05-7 (**)	0.01%			No.18	Adhesive layer
Ex : DEF0000	Nonadecafluorodecanoic Acid	335-76-2	2%		No.1		
Ex : DEF0000	Lead and its compounds	-(**)	0.05%	No.5			

※If there are not enough fields to fill in, please add the new fields.
 ※Please report regardless of whether or not the product contains the chemical substance(s) in question.
 ※If no substance is contained in the product, please enter only the "name of the product" and leave the "name of the substances contained in the product" section blank.

Contact

(*) Bisphenol A is a residual substance.
 (**) The CAS No. of lead and its compounds cannot be specified.

6. Contact

Dexerials Corporation

Products Environment Section, Management System Department, Sustainability Promotion Division

TEL : +81 285 47 3215

EMAIL : dxj-ml-seihinkankyo@dexerials.com

Revision History		
Version No	Enforcement date	Description
Ver.1.0	October 18, 2012	The establishment of the first edition
Ver.2.0	March 19, 2013	<p>The revision by the periodical review</p> <ol style="list-style-type: none"> Added new level 3 substances (Diisopentylphthalate, "1,2-Benzenedicarboxylic acid,dipentylester,branched and linear" N-pentyl-isopentylphthalate, Ethylene glycol dimethyl ether,Perchlorate) Moved up of the delivery prohibition time of level 2 substances (HBCDD, dibutyl phthalate etc.) Changed the expression of the target use (cadmium, lead, mercury, PVC, DBT, DOT, specific benzotriazoles, dibutyl phthalate etc. packing materials) Changed of the standard / threshold level (cadmium, lead, mercury, Hexavalent chrome, PCB, PCN, PCT, PBB, PBDE) Corrected the error in writing
Ver.3.0	March 14, 2014	<ol style="list-style-type: none"> Added of new level 1 substances (TCPP, TDCPP, PFOA, SF6) , TCEP is changed level 1 from level 2, Added of new level 2 substances (PAH), Changed prohibition time of level 2 of Cd and Cd compound to July 1, 2014.. Added of new level 3 substances (Dipentyl phthalate, Trixylyl phosphate) Fixed date comes and changes level 1 from level 2 (HBCDD) Corrected of the error in writing
Ver.4.0	July 10, 2015	<p>The revision by the periodical review</p> <ol style="list-style-type: none"> Added new level 1 substance (six fluorinated sulfur SF6) to the revision history of Ver3.0 Revised the ninth page TCCP to TCPP, and TDCCP to TDCPP Added the table of contents and correction Revised 4.2 titles to " Additional rules for packing components and materials used for the product" Added the matter about the packing components and materials used for the delivery of parts / raw materials / sub-materials to be used for the product for 4.3 Revised 4.3 "Additional rules for batteries (Applicable to all batteries in commercial distribution)" to 4.4 Added Dexerials Co. Ltd. Group to 1(Purpose) Revised 2(Scope) Added (more than molecular weight 10,000) to a synthetic macromolecule in 3(TERMS AND DEFINITIONS) In 4.3, did it if not intended for the thing delivered to DXJ,DXSC,DXSA,DXSZ about the packing components and materials used for/ the delivery of parts/raw materials / sub-materials to be used for the product and intend for only the thing delivered to DXA,DXE Added new level 1 substances (HCFC, BNST) Fixed date comes and changes level 1 from level 2 in Ver3.0 [Cadmium and cadmium compounds, Perfluorooctanoic acid (PFOA) and individual salts and esters of PFOA, Dibutyltin (DBT) compounds, Diarsenic trioxide, Diarsenic pentaoxide, Bis (2-ethylhexyl)phthalate, Dibutyl phthalate, Benzyl butyl phthalate, Diisobutyl phthalate, PAH Added level 2 substances (Bis (2-ethylhexyl)phthalate, Dibutyl phthalate, Benzyl butyl phthalate, Diisobutyl phthalate) Add new level 3 substances (DOTE, reaction mass of DOTE and MOTE) The substance which changed the name of the substance It was Specific benzotriazole in Ver3.0, but it is changed the name in Ver4.0 to 2-benzotriazol-2-yl-4,6- di-tert-butylphenol(UV-320) The substances which changed expression

Revision History		
Version No	Enforcement date	Description
Ver.5.0	March 14, 2017	<p>The revision by the periodical review</p> <ol style="list-style-type: none"> Contents <ul style="list-style-type: none"> Changed the PACKAGING components/materials to Sub-Materials in table of contents 4.2,4.3 Addition of a definition <ul style="list-style-type: none"> Added Supply, Part, Material, Homogenous material, Article to the definition. Environment-relates substances <ul style="list-style-type: none"> Added new level 1 substance : Nickel Added new level 3 substance : Redioactive substances Changed the substance name about the following substances and adddd substances in SVHC candidate list. PBB, PBDE, HBCD, PCB, TCEP, TCPP, TDCPP, Fluorinated greenhouse gases, PFOA, DMF, BFR, CFR, DnHP, Substances in SVHC candidate list Changeed the expression of Targets / Threshold level about the following substances. : D EHP, DBP, BBP, DIBP, Cadmium and its compounds, Lead and its compounds, Mercury and its compounds, Chromium(VI) compounds, PBB, PBDE, HBCDD, PCB, SCCP, TCEP, TCPP, TDCPP, Fluorinated greenhouse gases, ODS(HCFC), PFOS, PFOA, ,TCEP, TCPP, TDCPP, DBT, DOT, Beryllium oxide Cobalt dioxide, Diarsenic trioxide, Diarsenic pentoxide, DINP, DIDP, DNOP, Formaldehyde, Azocolourants and azodyes, UV320, DMF, PAH, BFR, CFR, DnHP, Perchlorates, Substances in SVHC candidate list Added (note 1), (note 2) to 4.2.1 the definition of sub-materials. Changed contents of list 4.3a to main sub-materials used in Dexerials Corporation Group Change expression of 4.4 table 4.4
Ver.6.0	March 14, 2018	<p>The revision by the periodical review</p> <ol style="list-style-type: none"> Changed the document management number from MS-3004 to QS-082. In Table 4.1 of environmental management substances, remove BNST, and change the expression of the substance name of HBCDD , Ozone depleting substances , Nickel. In Table 4.2, Level 2 uses of DEHP, DBP, BBP, and DIBP are changed to Level 1. Reviewed cadmium and lead exemption items. Changed the threshold level of HBCDD Expanded the subject substances of ozone depleting substances to the materials of the Montreal Protocol Annex A, B, C, and E. Added the test method and threshold level of Formaldehyde Added the Four substances to the substances in candidate list for authorization EU REACH regulation. In Table 4.4 Change the one part of threshold level of Lead and the object and threshold level of Mercury are aggregated Dexerials Advanced Material (Suzhou) Co.Ltd. is deleted by the Dexerials group.
Ver.7.0	March 18, 2019	<p>The revision by the periodical review</p> <ol style="list-style-type: none"> Added management level to the Table 4.1 Environment-related Substances to be Controlled. In Table 4.2, DEHP, DBP, BBP, and DIBP added new level 1 use (parts and materials used for toys or childcare products) and level 2 use change level 3 use. Cadmium and its compounds, Lead and its compounds: revised the application exclusions. PFOS: removed some of the application exclusions. Perfluorooctanoic acid (PFOA) and individual salts and esters of PFOA: changed coverage to all. Added Perfluorooctanoic acid (PFOA) and its salts and related substances Nickel: added new level 1 use (wrist-watch and wristband product) . Formaldehyde: removed additional criteria for hard plywood, particleboard and medium density fiberboard incorporated in wood products In table 4.2 b, added 12 substances to List of Substances in candidate list for authorization of EU REACH regulation.

Revision History		
Version No	Enforcement date	Description
Ver.8.0	May 21, 2020	<p>The revision by the periodical review</p> <ol style="list-style-type: none"> In 3. Modified some of the definitions of terms (delivered goods, parts, raw materials, sub-materials) and added one part of threshold levels. Added environmental-related Substances to be Controlled <ul style="list-style-type: none"> New regulated substances (PFHxS, 4-aminobenzene, BPA, CMR substances of EU REACH regulation, one part of SVHC candidate substances of EU REACH regulation.) Substances that have been added or changed target (DBHP, DBP, BBP, DIBP) Substances with added or changed threshold levels (Cd, Pb, PBB, PBDE, PFOA and its salts, related substances of PFOA, Ni) In 4.2.1 Supplemented some definitions of sub-materials In 4.4 Items related to batteries are included in Table 4.2, so deleted
Ver.9.0	May 17, 2021	<p>The revision by the periodical review</p> <ol style="list-style-type: none"> Deleted letter "sample" described in 1. PURPOSE and 2.SCOPE Added Dexerials Precision Components Corporation (DXPC) in 1.PURPOSE 4) Deleted letter " Considering possibility of phase-out in the future (i.e. reclassification into Level 2)" in 3. TERMS AND DEFINITIONS Added Environment-related Substances to be Controlled <ul style="list-style-type: none"> New controlled substances <ul style="list-style-type: none"> [(Canada) Prohibition of Certain Toxic Substance Regulations] <ul style="list-style-type: none"> 1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10]octadica-7,15-diene ("Dechlorane Plus"™) PFCAs and its salts and related Substances Decabromodiphenylethane (DBDPE) [(EU) Commission Regulation(EU)2019/2021 laying down ecodesign requirements for electronic displays] <ul style="list-style-type: none"> Halogenated flame retardants [(EU) REACH regulation] <ul style="list-style-type: none"> PFHxA and its salts and related substances Dioctyltin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs.,and any other stannate,Dioctyl-, bis (fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety Bis(2-(2-methoxyethoxy)ethyl)ether Dibutylbis (pentane-2,4-dionato-O,O') tin [(USA) TSCA] <ul style="list-style-type: none"> Long-chain perfluoroalkyl carboxylate(LCPFACs) and perfluoroalkyl sulfonate chemicals Decabromodiphenyl eter (DecaBDE) · Phenol, Isopropylated Phosphate (PIP) (3:1) 2,4,6-Tris(tert-butyl)phenol (TTBP) · Pentachlorothiophenol (PCTP) Hexachlorobutadiene (HCBD) · List of the First 10 Chemical Substances Undergoing TSCA's Risk Evaluation List of the 20 High-Priority Substances Selected to Undergo TSCA's Risk Evaluation Process Added / Changed of Targets <ul style="list-style-type: none"> [(USA) California RoHS] <ul style="list-style-type: none"> Cd ,Pb, Hg and its compounds / Chromium(VI) compounds / PVC and its blends Changed of Threshold levels <ul style="list-style-type: none"> [(EU) Stockholm Convention on Persistent Organic Pollutants] <ul style="list-style-type: none"> Perfluorohexane-1- sulfonic acid (PFHxS) and its salts Changed of Expiration date of Exemption <ul style="list-style-type: none"> Cd ,Pb, Hg and its compounds / PFOA and individual salts and esters of PFOA Changed of the use <ul style="list-style-type: none"> PFOA and individual salts and esters of PFOA Changed of Testing methods <ul style="list-style-type: none"> Azocolourants and azodyes which form certain aromatic amines / 4-Aminoazobenzene Deleted letter " the thing delivered to DXE about the sub-materials used for the delivery of parts/raw materials / sub-materials to be used for the product are the object of 4.1 and 4.2"

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Ver.9.1	June 8, 2021	<ol style="list-style-type: none"> 1. Changed the representation from Dexerials Corporation Group to Dexerials Group in 1. Purpose, 2. Scope, 2.2 Scope applicable to products, 3. Terms and Definitions, 4.2, 4.3, as in the QS-082 2. Added 15) Dexerials Group in 3. Terms and Definitions Deleted letter related Dexerials Group in 1. Purpose
Ver.10.0	Aug 29, 2022	<ol style="list-style-type: none"> 1. Changed List format (level 1-3 substances, exemplified substances, EU RoHS Directive exemptions, other exemptions from regulations) 2. In 4.1 Environment-related Substances to be Controlled New controlled substances <ul style="list-style-type: none"> [EU] PFCAs (C9-C14) and its salts and related Substances, Hexachlorobenzene(HCB), Full of Candidate List of substances of very high concern for Authorisation Pentachlorophenol (PCP) and its salts and esters [US] Perfluoroalkyl compounds (PFAS) <p>Changed from level 2 to level 3 [Canada] Decabromodiphenylethane (DBDPE) and Dechloran Plus TM</p> <p>Changed from level 2 to level 1 [US] TSCA First Priority 10 Substances [Stockholm Convention] Perfluorohexane-1-sulfonic acid (PFHxS) and its salts and related substances: changed from level 2 to level 3 (scope also changed)</p> <p>Changed from level 3 to level 2 [Canada] Long-chain (C9-C21) perfluoroalkylcarboxylic acids (PFACs) and their salts and related substances renamed</p> <p>Renamed substance Substances in the EU REACH CMR substance (Entry 72) list changed to "environmentally controlled substances for leather/textile products"</p> 3. Added new sections <ul style="list-style-type: none"> 5. Request for Management Standards for the Environment-Related Substances Report 6. Contact

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Ver.11.0	July 28, 2023	<p>Cover Moved the location of the disclaimer from "2. Scope" to a prominent location (It is important that if there are laws and regulations regarding prohibitions and restrictions in countries and regions that are not listed in this management standard, it is necessary to comply with those laws and regulations.)</p> <p>2. Scope Deleted "2.1 Scope of application to parts, raw materials and secondary materials" and "2.2 Scope of application to products and prototypes" and changed to the following. (Suppliers and subcontractors do not know our usage, and we confirm customer standards even if we cannot confirm customer usage.)</p> <ul style="list-style-type: none"> • Products and prototypes are manufactured by our company manufacturing sites and consignment company • Semi-finished products, parts, raw materials and secondary materials that make up the above <p>3. Terms and Definitions</p> <ul style="list-style-type: none"> • Removed terms : "Target" (The reason for this is that the "Target" column has been deleted from Tables 1 to 3.) "Battery", "Battery Pack", "Button Cell" (The reason is that we do not have the relevant product.) • Added terms : "Products, prototypes" (Since the definition was described in "2.2 Scope of application to products and prototypes", the description location was changed.) "Semi-finished product" • Corrected wording : Deleted the wording about "substances and their uses" from the definitions of Level 1, Level 3, and exemptions of "Control Level" (The reason for this is that the "Target" column has been deleted from Tables 1 to 3.) <p>4. Management standards for "Environment-related substances to be controlled"</p> <ul style="list-style-type: none"> • Change the position of "○" in "Management level (level)" in the list of environmental management substance names to match the added/deleted substances in Tables 1 to 3. <p>Table 1~3.</p> <ul style="list-style-type: none"> • Removed "Target" column (.Suppliers and subcontractors do not know our usage, and we confirm customer standards even if we cannot confirm customer usage) <p>Table 1. Level 1 substances</p> <ul style="list-style-type: none"> • Added substance : [Canada] Long-chain(C9-C21) perfluorocarboxylicacids(PFCAs) and its salts and related substances, [US] Phenol, IsopropylatedPhosphate (PIP (3:1)) (Changed from Level 2 substance to Level 1 substance due to the expiration of the ban.) • Removed substance : Dioctyltin(DOT)compounds, NickelandNickelcompounds, Di-isonylphthalate (DINP), Di-isodecylphthalate (DIDP), Di-n-octylphthalate (DNOP), Formaldehyde, Polycyclic aromatic hydrocarbons (PAH), Azocolourants and azodyes which form certain aromatic amines Diarsenictrioxide (This is because our products are not subject to the regulations of each country) Polyvinylchloride(PVC) and PVC blends Polyvinyl chloride and PVC blends (Because it is not prohibited by law) Controlled substances for Leather/Textile Products (The reason is that we do not have the relevant product.) • Deletion of threshold levels of target that do not apply to our products • Fixed typo in threshold levels of Dimethyl fumarate (DMF) : 1000ppm(0.1wt%) or more → 0.1ppm (0.00001wt%) or more <p>Table 2. Level 2 substances</p> <ul style="list-style-type: none"> • Added substance : [POPs]•UV-328 •Dechlorane Plus™ (The reason is that it has been designated as a substance to be eliminated by the POPs Convention.、 Expiration Date : May 1, 2024) <p>Table 3. Level 3 substances</p> <ul style="list-style-type: none"> • Added substance : [EU] Di-n-octylphthalate (DNOP) (The reason for this is that we have determined that internal management is necessary.) • Changed all threshold levels to "Contained" (The reason is that it is necessary to manage within our company regardless of the threshold.)

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Ver.11.0	July 28, 2023	<p>Appendix 1. Examples of substances and its compounds Polybrominated biphenyls (PBBs) : CAS No. correction 2113-57-5 → 2113-57-7 (due to typo) Deleted CAS No. 81831-52-4 (due to typo) Controlled substances for Leather/Textile Products : Deleted (The reason is that we do not have the relevant product.)</p> <p>Appendix 3. Other regulatory exemptions • Added substances : [EU] Polycyclic aromatic hydrocarbons (PAH) [US] 2,4,6-Tris (tert-butyl) phenol (TTBP) Long-chain perfluoroalkyl carboxylate (LCPFACs) and perfluoroalkyl sulfonate chemicals (Exemptions from level 1 substances have been moved to Appendix 3 due to the deletion of the Table 1. "Target" column.) • Removed substances : SF6 (Deleted due to internal usage), DOT, PVC (Due to removal from Level 1 substances)</p> <p>5. Request for Management Standards for the Environment-Related Substances Report • Format 1 Added wording : 「Submission destination/Inquiries」・「proviso」 (This is because submissions/inquiries should be made to the Product Environment Section, not to the procurement department.)</p>
Ver.12.0	May 9, 2024	<p>3. Terms and Definitions "Dexerials Group" • Removed company : Dexerials America Corporation (DXA) , Dexerials Europe B.V. (DXE) ,Dexerials (Suzhou) Co.Ltd. (DXSC)</p> <p>Table 1. Level 1 substances • Added substance : Dechlorane Plus, UV-328 (The substance was changed from a Level 2 substance to a Level 1 substance due to the ban date having arrived.)</p>
Ver.13.0	August 1, 2024	<p>4. Management standards for "Environment-related substances to be controlled" / the list of environmental management substance names • Added circles to the exemption column for Dechlorane Plus and UV-328</p> <p>Table 1. Level 1 substances Added "Appendix 3" to the exemptions column for Dechlorane Plus and UV-328, and added "Chemical Substances Control Law " to the main reference laws and regulations column</p> <p>Appendix 3. Other regulatory exemptions Added Dechlorane Plus and UV-328</p>