

Fuji Electric's Green Procurement Guideline

Appendix II

List of Controlled Substances, Non-Content Certificate and Reported Data on Contained Substances

Edition 6.0.1



December 2024

Fuji Electric Co., Ltd.

Contents

I. Fuji Electric's Policy for Controlled Substances -----	2
1. Prohibited substances	
2. Conditionally prohibited substances	
3. Voluntary controlled substances	
4. Declarable substances	
5. Prohibited substances in specific countries	
II. List of Prohibited Substances-----	4
III. List of Conditionally Prohibited Substances -----	10
IV. List of Voluntary Controlled Substances -----	15
V. List of prohibited substances in specific countries -----	17
VI. Details of Controlled Substances-----	18
VII. Fuji Electric's concept of exempted used for controlled substances -----	29
1. Application Exclusion Items Group A	
2. Application Exclusion Items Group B	
3. Application Exclusion Items Group C	
4. Supplement to EU-RoHS2: Categories of electrical and electronic equipment to which EU-RoHS2 applies	
[History of Revisions]-----	31
[Attachment 1] Non-Content Certificate	
Reported Data on Contained Substances	
[Attachment 3] French packaging material mineral oil ink regulation survey sheet	

I. Fuji Electric's Policy for Controlled Substances

Controlled substances in “4. Evaluation items”, “(3) Measures related to content of chemical substances in supplied materials” of “II. Fuji Electric's Green Procurement Concept Guideline” in Fuji Electric's Green Procurement Guideline (Main) are determined according to the following.

1. Prohibited substances

This category determines what must not be contained in delivered materials including substances that are prohibited from being used and manufactured according to domestic and overseas laws, regulations and treaties, and substances that are prohibited from being used by Fuji Electric. For more information about particular substances, refer to “II. List of Prohibited Substances”.

2. Conditionally prohibited substances

Among the substances that are prohibited from being used and manufactured according to domestic and overseas laws, regulations, and treaties, and substances that are prohibited from being used by Fuji Electric, these substances have application exclusions for their prohibition depending on the usage, content conditions, and content location. This category determines what must not be contained in materials excluding cases that apply to the application exclusion items determined in “VI. Fuji Electric's concept of exempted used for controlled substances” in this document. For more information about particular substances, refer to “III. List of Conditionally Prohibited Substances”.

3. Voluntary controlled substances

The following substances are those that Fuji Electric has judged as highly important to monitor their contained in products based on domestic and international laws and regulations, treaties, and industry initiatives. The content of these substances will be monitored only when they are “intentionally added”.

- Substances scheduled to be added to the Stockholm Convention (POPs)
- Substances that are being considered for future prohibition under the RoHS directives, etc.

For specific target substances, please refer to “IV List of Voluntarily Controlled Substances”.

4. Declarable substances

Fuji Electric is required to monitor the content of these substances in its products in accordance with domestic and international laws and regulations, treaties, and industry initiatives.

(1) Substances to be controlled by chemSHERPA

Please refer to chemSHERPA's website for specific substances.

Website : <https://chemsherpa.net/tool#declarable>

- * The most recent version of the target substances from the above organizations will be given priority. Please note that there are substances that overlap with the above four categories of “Prohibited Substances” and other substances, but please report their content separately. Please refer to “[Attachment 2] Reported Data on Contained Substances” in this document for the format of the report.

(2) Supplemental Information: Standards and organizations that target declared substances

- chemSHERPA (A scheme that facilitates sharing information on chemical substances in products)
Scheme created at the initiative off the Ministry of Economy, Trade and Industry, integrating JAMP and the former JGPSSI.

A common scheme that can be used throughout the supply chain to properly manage chemical substances contained in products and to continuously comply with expanding regulations.

- JAMP (Joint Article Management Promotion-consortium)

This is an organization established for promoting proper management and smooth information disclosure of chemical substances contained in products for the whole industry and whole supply chain in addition to the electric and electronic equipment industries. As with JIG, there are common standards for “Chemical substances that must be controlled” and “Survey answer format for information distribution”.

5. Prohibited substances in specific countries

It is a substance that is prohibited in specific countries under special conditions.

- (1) French Circular Economy Law Article 112 packaging material mineral oil ink regulation

Please refer to "V. List of prohibited substances in specific countries" for specific target substances.

II. List of Prohibited Substances

#	Substance Name	CAS No.	Major Applicable Laws/Regulations	Examples of Use	Edition
1	Bis(tributyltin) oxide (TBTO)	56-35-9	Chemical Substance Control Law (Class I Specified Chemical Substance)	Antiseptic, antifungal agent, paint, pigment, antistaining, refrigerant, foaming agent, extinguishant, solvent cleaner	1
2	tri-substituted organostannic compounds * For details, refer to “V. Controlled Substance Details”	-	• Regulation (EC) No 1907/2006 of the European Parliament and of the Council Annex 17 (hereafter, REACH Regulation (Restricted Substances No.20))	Stabilizer, antioxidant, antiseptic, antibacterial and antifungal agents, antifoulant, pigment, antifungal agents, paint, antistaining	5.0.0
3	Polychlorinated biphenyls (PCBs) and specific substitutes * For details, refer to “V. Controlled Substance Details”	-	• Chemical Substance Control Law (Class I Specified Chemical Substance) • Stockholm convention on Persistent Organic Pollutants (hereafter, POPs Treaty) (Restricted Usage/Production) • Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (hereafter, Hong Kong Convention)(Appendix 1, Table A)	Insulation oil, lubricant oil, electrical insulation medium, solvent, electrolytic solution; plasticizers, flame retardants, coatings for electrical wire and cable, dielectric sealants	1
4	Polychlorinated terphenyls (PCT) * For details, refer to “V. Controlled Substance Details”	-	• REACH Regulation (Restricted Substances No.1)	Insulation oil, lubricant oil, electrical insulation medium, solvent, electrolytic solution; plasticizers, flame retardants, coatings for electrical wire and cable, dielectric sealants	4
5	Polychlorinated naphthalenes (more than 3 chlorine atoms) * For details, refer to “V. Controlled Substance Details”	-	• Chemical Substance Control Law (Class I Specified Chemical Substance)	Lubricant, paint, stabilizer (electric characteristic, flame-resistant, water-resistant) insulator, flame retardant	1 5.0.1
6	Shortchain chlorinated paraffins (C10 to 13) * For details, refer to “V. Controlled Substance Details”	-	• Norwegian Product Regulations FOR-2004-06-01-922 • Swiss Ordinance on Reduction of Risk from Chemical Products (ORRChem) • Chemical Substance Control Law (Class I Specified Chemical Substance) • POPs Treaty (Restricted Usage / Production)	Plasticizer for PVC, flame retardant	4
7	Asbestos * For details, refer to “V. Controlled Substance Details”	-	• Industrial Safety & Health Act (Restricted Substances) • REACH Regulation (Restricted Substances No.6) • Hong Kong Convention (Appendix 1, Table A)	Brake lining pad, insulator, filler, abrasive, insulator, filler, pigment, paint, talc, adiabatic material	1

#	Substance Name	CAS No.	Major Applicable Laws/Regulations	Examples of Use	Edition
8	2-(2H-benzotriazol-2-yl)-4,6-di-tert-butylphenol	3846-71-7	Chemical Substance Control Law (Class I Specified Chemical Substance)	Adhesive, paints, printing ink, putty, plastic and ink ribbons, caulking or sealing filler	3
9	Hexachlorobenzene [Comment] Caution as byproduct	118-74-1	<ul style="list-style-type: none"> Chemical Substance Control Law (Class I Specified Chemical Substance) POPs Treaty (Restricted Usage/Production) 	Fungicides, insecticide	1
10	1,2,3,4,10,10-Hexachloro-1, 4, 4a, 5, 8, 8a-hexahydro-exo-1,4-endo-5,8-dimethanonaphthalene (alias: Aldrin)	309-00-2	<ul style="list-style-type: none"> Chemical Substance Control Law (Class I Specified Chemical Substance) POPs Treaty (Restricted Usage/Production) 	Insecticide	1
11	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4, 4a, 5, 6, 7, 8, 8a-octahydro-exo-1,4-endo-5,8-dimethanonaphthalene; 1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4, 4a, 5, 6, 7, 8, 8a-octahydro-endo-1,4-exo-5,8-dimethanonaphthalene (alias: Dieldrin)	60-57-1	<ul style="list-style-type: none"> Chemical Substance Control Law (Class I Specified Chemical Substance) POPs Treaty (Restricted Usage/Production) 	Insecticide	1
12	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4, 4a, 5, 6,7,8, 8a-octahydro-endo-1,4-endo-5,8-dimethanonaphthalene; 1,2,3,4,10,10-Hexachloro-6,7- epoxy-1,4, 4a, 5, 6,7,8, 8a-octahydro-exo-1,4-exo-5,8-dimethanonaphthalene (alias: Endrin)	72-20-8	<ul style="list-style-type: none"> Chemical Substance Control Law (Class I Specified Chemical Substance) POPs Treaty (Restricted Usage/Production) 	Insecticide	1
13	1,1,1-trichloro-2,2-bis (parachlorophenyl) ethane(alias: DDT)	50-29-3	<ul style="list-style-type: none"> Chemical Substance Control Law (Class I Specified Chemical Substance) POPs Treaty (Restricted Usage/Production) 	Insecticide	1

#	Substance Name	CAS No.	Major Applicable Laws/Regulations	Examples of Use	Edition
14	Mixture of 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-4,7-methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-4,7-methano-1H-indene or their relative compounds (alias: Chlordane or Heptachlor) * For details, refer to “ V . Controlled Substance Details”	-	<ul style="list-style-type: none"> • Chemical Substance Control Law (Class I Specified Chemical Substance) • POPs Treaty (Restricted Usage/Production) 	Insecticide	1
15	N,N'-ditolyl-p-phenylenediamine, N-tolyl-N'-xylyl-p-phenylenediamine or N,N'-dixylyl-phenylenediamine * For details, refer to “ V . Controlled Substance Details”	-	Chemical Substance Control Law (Class I Specified Chemical Substance)	Rubber aging inhibitor, styrenebutadiene rubber	1
16	2,4,6-tri-tertbutylphenol	732-26-3	Chemical Substance Control Law (Class I Specified Chemical Substance)	Oxidation inhibitor	1
17	Polychloro-2,2-dimethyl-3-methylidenebicyclo [2.2.1] heptane (alias: Toxaphene)	8001-35-2	<ul style="list-style-type: none"> • Chemical Substance Control Law (Class I Specified Chemical Substance) • POPs Treaty (Restricted Usage/Production) 	Insecticide	1
18	Dodecachloropentacyclo [5.2.1.02,6.03,9.05,8] decane (alias: Mirex)	2385-85-5	<ul style="list-style-type: none"> • Chemical Substance Control Law (Class I Specified Chemical Substance) • POPs Treaty (Restricted Usage/Production) 	Insecticide, flame retardant	1
19	2,2,2-trichloro-1,1-bis (4-chlorophenyl) ethanol (alias: Kethane or Dicohol)	115-32-2	Chemical Substance Control Law (Class I Specified Chemical Substance)	Tick repellent	3

#	Substance Name	CAS No.	Major Applicable Laws/Regulations	Examples of Use	Edition
20	Hexachlorobuta-1,3-diene	87-68-3	Chemical Substance Control Law (Class I Specified Chemical Substance)	Solvent	3
21	Yellow phosphorus match (tetraphosphorus)	12185-10-3	Industrial Safety & Health Act (Restricted Substances)	Match	1
22	Benzidine and its salts	92-87-5	Industrial Safety & Health Act (Restricted Substances)	Raw coloring material	1
23	4-Aminobiphenyl and its salts	92-67-1	Industrial Safety & Health Act (Restricted Substances)	Rubber oxidation inhibitor	1
24	4-Nitrobiphenyl and its salts	92-93-3	Industrial Safety & Health Act (Restricted Substances)	Synthetic intermediate	1
25	Bis(chloromethyl) ether	542-88-1	Industrial Safety & Health Act (Restricted Substances)	Dye, pigment, methylating agent	1
26	β -Naphthylamine and its salts	91-59-8	Industrial Safety & Health Act (Restricted Substances)	Raw coloring material	1
27	Benzene containing rubber dough, its benzene content exceeds 5 % of the solvent (including diluents) of the concerned gum dough	71-43-2	Industrial Safety & Health Act (Restricted Substances)	Rubber dough	1
28	Dioxin group / Furan group (PCDD/PCDF)		POPs Treaty (Unintentional Production/Release)	Non-intentional generation	1
29	Dimethyl fumarate	624-49-7	REACH Regulation (Restricted Substances No.61)	Antiseptic, fungicides	4
30	γ -Hexachlorocyclohexane (γ -HCH or Lindane)	58-89-9	• Chemical Substance Control Law (Class I Specified Chemical Substance) • POPs Treaty (Restricted Usage/Production)	Insecticide	4
31	α -Hexachlorocyclohexane (α -HCH)	319-84-6	• Chemical Substance Control Law (Class I Specified Chemical Substance) • POPs Treaty (Restricted Usage/Production)	Byproduct of No. 30 " γ -Hexachlorocyclohexane"	4

#	Substance Name	CAS No.	Major Applicable Laws/Regulations	Examples of Use	Edition
32	β -Hexachlorocyclohexane (β -HCH)	319-85-7	<ul style="list-style-type: none"> • Chemical Substance Control Law (Class I Specified Chemical Substance) • POPs Treaty (Restricted Usage/Production) 	Byproduct of No. 30 “ γ -Hexachlorocyclohexane”	4
33	Chlordecone (Kepone)	143-50-0	<ul style="list-style-type: none"> • Chemical Substance Control Law (Class I Specified Chemical Substance) • POPs Treaty (Restricted Usage/Production) 	Insecticide	4
34	Pentachlorobenzene	608-93-5	<ul style="list-style-type: none"> • Chemical Substance Control Law (Class I Specified Chemical Substance) • POPs Treaty (Restricted Usage/Production) 	Agrochemicals, unintentional generation	4
35	Perfluorooctane sulfonyl fluoride (PFOSF)	307-35-7	Chemical Substance Control Law (Class I Specified Chemical Substance)	Precursor of perfluorooctane sulfonate (PFOS)	4
36	Hexabromocyclododecane (HBCD) * For details, refer to “V. Controlled Substance Details”	25637-99-4	Chemical Substance Control Law (Class I Specified Chemical Substance)	Fire retardant	5.0.1
37	Endosulfan	115-29-7	Chemical Substance Control Law (Class I Specified Chemical Substance)	Agrochemical	5.0.1
38	Pentachlorophenol	87-86-5	Chemical Substance Control Law (Class I Specified Chemical Substance)	Antiseptics, insect repellents, antifungal agents, and mildew	5.0.1
39	Tris(isopropylphenyl) phosphate (PIP(3:1))	68937-41-7	U.S. TSCA PBT Regulations	Flame retardants, plasticizers, adhesives, sealants, lubricants	6.0.0
40	Pentachlorothiophenol (PCTP)	133-49-3	U.S. TSCA PBT Regulations	Rubber kneading accelerator	6.0.0

#	Substance Name	CAS No.	Major Applicable Laws/Regulations	Examples of Use	Edition
41	Long-chain PFCA (perfluorocarboxylic acid, 9-14 carbons) * For details, refer to “V. Controlled Substance Details”	375-95-1 335-76-2 2058-94-8 307-55-1 72629-94-8 376-06-7	REACH Regulation (Restricted Substances No.68)	Fire extinguishing agents, water repellents, surfactants, rust inhibitors, etchants, anti-reflective coatings, plating solutions, coatings, solder, lubricants, adhesives, paints	6.0.0
42	Perfluorohexanesulfonic acid (PFHxS) and its salts, and PFHxS-related substances	355-46-4	POPs Treaty (Restricted Usage/Production)	Surfactant *Intentional addition	6.0.0
43	Methoxychlor	72-43-5	POPs Treaty (Restricted Usage/Production)	Pesticides, alternatives to DDT	6.0.0
44	Declorane Plus	13560-89-9 135821-03-3 35821-74-8	• POPs Treaty (Restricted Usage/Production)	Flame retardant *Intentional addition	6.0.0
45	UV-328 (2- (2 H -1, 2, 3 Benzotriazole -2 -yl) -4, 6-Di-tert-Pentylphenol)	25973-55-1	POPs Treaty (Restricted Usage/Production)	Ultraviolet absorber for plastic resin *Intentional addition	6.0.0

III. List of Conditionally Prohibited Substances

No.	Substance Name	CAS No.	Major Applicable Laws/Regulations	Prohibited Condition	Threshold	Examples of Use	Edition
1	Cadmium / Cadmium compounds * For details, refer to “V. Controlled Substance Details”	-	<ul style="list-style-type: none"> • DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (EU) 2023/1542 (hereafter, EU Battery Regulation) • Korean Quality Management and Safety Control of Industrial Products Act (hereafter, Korean Battery Regulation) • EUROPEAN PARLIAMENT AND COUNCIL DIRECTIVE 94/62/EC (hereafter, EU Packaging Directive) • REACH Regulation (Restricted Substances No.23) • DIRECTIVE 2011/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (hereafter EU-RoHS2) 	(i) Batteries (ii) Packaging: Total amount of heavy metals (lead, mercury, cadmium, chromium VI) (iii) All except (i) and (ii) (In application exclusion items groups A and B)	< 10ppm Total < 100ppm In homogeneous materials < 100ppm	Pigment, anti-corrosion surface treatment, electronic/electric materials, solder, optical materials, stabilizers, plating, pigment for resins, zinc plating, electrodes, electric contacts, fluorescent, contact points, stabilizers for PVC, batteries	1
2	Chromium VI compounds * For details, refer to “V. Controlled Substance Details”		<ul style="list-style-type: none"> • EU Packaging Directive • EU-RoHS: (EU)2015/863 • REACH regulation (Restricted Substances No.47) 	(i) Packaging: Total amount of heavy metals (lead, mercury, cadmium, chromium VI) (ii) All except (i) (In application exclusion items groups A and B)	Total < 100ppm In homogeneous materials < 1000ppm	Chroming, pigment, catalyst, plating, paint drying, anticorrosion surface treatments, dyes, surface treatments, paint, paint adhesion reinforcement, anti-corrosion, ink	1
3	Lead / lead compounds * For details, refer to “V. Controlled Substance Details”		<ul style="list-style-type: none"> • US/CA Proposition 65 Case law • EU Battery Regulation • Korean Battery Regulation • Brazilian Battery Regulation Resolution No.401 • EU Packaging Directive • EU-RoHS : (EU)2015/863 • REACH regulation (Restricted Substances No.63) 	(i) Electrical wires and cables coated by thermal setting and thermoplastic resin coatings (ii) Batteries (iii) Packaging: Total amount of heavy metals (lead, mercury, cadmium, chromium VI) (iv) All except (i) to (iii) (In application exclusion items groups A and B)	In surface coatings < 300ppm < 40ppm Total < 100ppm In homogeneous materials < 1000ppm	Rubber hardener, lubricant, vulcanizing agent, free-cutting steels, optical materials, ferroelectrics, pigment, plastic stabilizer, hardeners, X-ray shielding in CRT glass, battery materials, free-machining alloy, plating, batteries, electric machine solder, coatings, resin stabilizer, metal alloy, resin additive, paint	1

No.	Substance Name	CAS No.	Major Applicable Laws/Regulations	Prohibited Condition	Threshold	Examples of Use	Edition
4	Mercury / mercury compounds * For details, refer to “V. Controlled Substance Details”	-	<ul style="list-style-type: none"> • EU Battery Regulation • Korean Battery Regulation • China QZHG 1997 No. 4: Regulation on mercury content limitation for batteries • EU Packaging Directive • EU-RoHS: (EU)2015/863 • REACH Regulation (Restricted Substances No.18, 18a) • Mercury Treaty 	(i) Batteries	< 1ppm	Fluorescent bulbs, contact point materials, pigment, anti-corrosion, switches, high-efficiency lighting, antibacterial treatments, batteries	1
				(ii) Packaging: Total amount of heavy metals (lead, mercury, cadmium, chromium VI)	Total < 100ppm		
				(iii) All except for (i) and (ii) (In application exclusion items groups A and B)	Intentionally added / In homogeneous materials < 1000ppm		
5	Polybrominated biphenyls (PBBs) * For details, refer to “V. Controlled Substance Details”	-	EU-RoHS: (EU)2015/863	All	Intentionally added / In homogeneous materials < 1000ppm	Flame retardant	1
6	Polybrominated diphenyl ethers (PBDEs) * For details, refer to “V. Controlled Substance Details”	-	EU-RoHS: (EU)2015/863	All	Intentionally added / In homogeneous materials < 1000ppm	Flame retardant	1
7	Perfluorooctane sulfonate (PFOS) * For details, refer to “ V . Controlled Substance Details”	-	<ul style="list-style-type: none"> • Chemical Substance Control Law (Class I Specified Chemical Substance) • POPs Treaty (Restricted Usage/Production) 	All (In application exclusion items group C)	Intentionally added	Antistatic agent for films and plastics	4

No.	Substance Name	CAS No.	Major Applicable Laws/Regulations	Prohibited Condition	Threshold	Examples of Use	Edition
8	Ozone depleting substances (Substances listed in Annexes of the Montreal Protocol on substances that deplete the ozone layer) * For details, refer to “V. Controlled Substance Details”	-	<ul style="list-style-type: none"> REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on substances that deplete the ozone layer (EC) No1005/2009 Ozone Layer Protection Law Hong Kong Convention (Appendix 1, Table A) 	(i) All (In products) (ii) Used for washing/foaming 20 substances listed in Annexes A, B	—	Refrigerant, foaming agent, extinguishant, solvent cleaner	5.0.0
9	Azocolourants and azodyes which form certain aromatic amines (*) * For details, refer to “V. Controlled Substance Details”	-	REACH Regulation (Restricted Substances No.43)	Textiles and leather	As formed aromatic amines < 30ppm	Colorants, pigment, rubber antioxidants, dyes	4.1
10	Dibutyl-tin compound (DBT) * For details, refer to “V. Controlled Substance Details”	-	REACH Regulation (Restricted Substances No.20)	Intended use for mass consumption	As tin element < 1000ppm	Stabilizer for PVC, curing catalyst for silicone resin and urethane resin	4.1
11	Diocetyl-tin compound (DOT) * For details, refer to “V. Controlled Substance Details”	-	REACH Regulation (Restricted Substances No.20)	Intended use for mass consumption	As tin element < 1000ppm	Stabilizer for PVC, curing catalyst for silicone resin and urethane resin	4.1
12	Tris phosphate (2,3-dibromopropyl)	126-72-7	REACH Regulation (Restricted Substances No.4)	Textiles	Intentionally added	Flame retardant for plastics and synthetic fibers	4.1
13	Tri(1-aziridine)-phosphine oxide	545-55-1	REACH Regulation (Restricted Substances No.7)	Textiles	Intentionally added	Flame retardant for plastics and synthetic fibers	4.1
14	Organic tin compound * For details, refer to “V. Controlled Substance Details”	-	Hong Kong Convention (Appendix 1, Table A)	Marine products	As tin element < 2500ppm	Preservatives, fungicides, paints, pigments, stain resistance agents, stabilizers, antioxidants, antibacterial antifungal agents, stain-proofing agent	5.0.0

No.	Substance Name	CAS No.	Major Applicable Laws/Regulations	Prohibited Condition	Threshold	Examples of Use	Edition
15	Phthalate esters (4 kinds) • Bis (2-ethylhexyl) phthalate DEHP • Butyl benzyl phthalate Butyl Benzyl Phthalate (BBP) • Di-n-butyl phthalate Di-n-butyl phthalate (DBP) • Diisobutyl phthalate DIBP	117-81-7 85-68-7 84-74-2 84-69-5	EU-RoHS: (EU)2015/863 REACH Regulation (Restricted Substances No.51)	(i) Use on parts of the body that come in contact with the skin for long periods of time with electrical equipment • Date of ban: Immediately (ii) Used in components of products subject to RoHS (excluding battery materials) • Date of ban: Immediately Uses for RoHS categories 1 to 7, 10 and 11 :July 22, 2018 RoHS Category 8&9 applications :July 22, 2020	Intentionally added/ Per homogeneous material <1000ppm	Plasticizer	5.0.1
16	Reaction products with benzeneamine, N-phenyl, styrene and 2,4,4-trimethylpentene (BNST)	68921-45-9	Canadian Environmental Protection Act	All (excluding rubber other than tires)	Intentionally added	Additive for rubber and lubricating oil (antioxidant)	6.0.1
17	Specific Polycyclic Aromatic Hydrocarbons PAH * For details, refer to “V. Controlled Substance Details”	-	REACH Regulation (Restricted Substances No.50)	Use on parts of the body that come into prolonged contact with human skin and oral cavity	Intentionally added	Pigments for rubber and plastics	5.0.1

No.	Substance Name	CAS No.	Major Applicable Laws/Regulations	Prohibited Condition	Threshold	Examples of Use	Edition
18	Perfluorooctanoic acid (PFOA) and its salts and esters * For details, refer to “V. Controlled Substance Details”	-	<ul style="list-style-type: none"> • Norway Regulations • Chemical Substance Control Law (Class I Specified Chemical Substance) • POPs Treaty (Restricted Usage/Production) 	Use in parts and components that make up Fuji Electric products	Intentionally added	Antistatic agent for films and plastics	5.0.1
19	Formaldehyde	50-00-0	<ul style="list-style-type: none"> • California Regulations, USA • REACH Regulation (Restricted Substances No.77) 	Use in wood products	Intentionally added	Preservative	5.0.1
20	Halogenated flame retardants	-	ErP Directive Display Implementation Regulations	Enclosures and stands for electronic displays, including televisions, monitors and digital signage displays with screens larger than 100 cm ²	Intentionally added	Electronic display enclosures and stands, including televisions, monitors and digital signage displays	6.0.0

IV. List of Voluntary controlled substances

No.	Substance Name	CAS No.	Major Applicable Laws/Regulations	Conditions of Use	Threshold	Examples of Use	Edition
1	Red Phosphorus	7723-14-0	Self-regulation	When used in electrical insulation applications, coating should be performed.	Intentionally added	Flame retardant	5.0.1
2	Long-chain PFCA (Perfluorocarboxylic acid, carbon 9~21)	-	POPs Treaty	-	Intentionally added	Foam extinguishing agent, plating solution, aircraft hydraulic fluid, water repellent, floor wax	6.0.0
3	Medium chain chlorinated paraffin (MCCP, carbon 14~17)	-	EU-RoHS Directive Prohibited Candidate POPs Treaty	-	Intentionally added	Flame Retardant, Plasticizer for Polyvinyl Chloride, Lubricant additive, Rubber, Adhesive	6.0.0
4	Tetrabromobisphenol A (TBBP-A) *Prohibition of additive type	79-94-7	POPs Treaty	-	Intentionally added	Reactive Flame Retardant (Bromoeпоxy resin, bromophenylaldehyde resin, bromo polycarbonate, etc.), Additive Flame Retardant (Polysilene, ABS resin, AS resin, phenol resin, etc.)	6.0.0

No.	Substance Name	CAS No.	Major Applicable Laws/Regulations	Conditions of Use	Threshold	Examples of Use	Edition
5	Fluorine compound	-	EU-PFAS regulation\	-	Intentionally added	Refrigerants for low-temperature cooling, industrial precision cleaning solutions, coating agents, surface treatment agents, chemical piping/cleaning components, high-performance filters, etching, wire cladding, printed circuit boards, liquid crystal materials, bearings/gaskets/sealants, piping/hoses, lubricants, rubber, insulating tape, etc.	6.0.0

V. Prohibited substances in specific countries

(1) French Circular Economy Law Article 112 packaging material mineral oil ink regulation

No.	Substance Name	CAS No.	Major Applicable Laws/Regulations	Conditions of Use	Threshold	Examples of Use	Edition
1	① Mineral oil aromatic hydrocarbons (MOAH) containing 1 to 7 aromatic rings ② Mineral oil saturated hydrocarbons (MOSH) containing 16 to 35 carbon atoms	-	French Circular Economy Law Article 112	enforcement January 1, 2025	Intentional addition of MOAH and MOSH at a mass concentration of 0.1% in ink and MOAH with 3 to 7 aromatic rings at a mass concentration of more than 1 ppm is prohibited.	Restricts the use of flame retardants in inks used for printing on the following: Packaging materials (paper, plastic), industrial flyers, catalogs, and printed materials for the general public	6.0.1

VI. Details of Controlled Substances

1. Prohibited substances

Tri-substituted Organostannic Compounds	CAS No.
Triphenyltin-N, N-dimethyldithiocarbamate	1803-12-9
Triphenyltinfluoride	379-52-2
Triphenyltinacetate	900-95-8
Triphenyltinchloride	639-58-7
Triphenyltinhydroxide	76-87-9
Triphenyltin fattyacid ((9-11) salt)	18380-71-7, 18380-72-8 47672-31-1, 94850-90-5
Triphenyltinchloroacetate	7094-94-2
Tributyltinmethacrylate	2155-70-6
Bis(tributyltin)fumalate	6454-35-9
Tributyltinfluoride	1983-10-4
Bis(tributyltin)2,3-dibromosuccinate	31732-71-5
Tributyltinacetate	56-36-0
1Tributyltinlaurate	3090-36-6
Bis(tributyltin)phthalate	4782-29-0
Copolymer of alkyl (c=8) acrylate, methyl methacrylate and tributyltin methacrylate	67772-01-4
Tributyltinsulfamate	6517-25-5
Bis(tributyltin)maleate	14275-57-1
Tributyltinchloride	1461-22-9, 7342-38-3
Mixture of tributyltin cyclopentanecarboxylate and its analogs (Tributyltin naphthenate)	85409-17-2
Mixture of tributyl tin 1,2,3,4,4a,4b,5,6,10,10a-decahydro-7-isopropyl-1,4a-dimethyl-1-phenanthrenecarboxylate and its analogs	26239-64-5

Polychlorinated Biphenyls (PCBs) and specific substitutes	CAS No.
Polychlorinated Biphenyls (all isomers and congeners)	1336-36-3
Monomethyl-tetrachloro-diphenyl methane (Ugilec 141)	76253-60-6
Monomethyl-dichloro-diphenyl methane (Ugilec 121, Ugilec 21)	81161-70-8
Monomethyl-dibromo-diphenyl methane (DBBT)	99688-47-8

Polychlorinated Terphenyls (PCTs)	CAS No.
Polychlorinated Terphenyls (all isomers and congeners)	61788-33-8

Polychlorinated Naphthalenes (having ≥ 3 chlorine)	CAS No.
Polychlorinated Naphthalenes	70776-03-3

Short Chain Chlorinated Paraffins (C10-C13)	CAS No.
Chloroalkanes C10-13	85535-84-8
Chloroalkanes C10-12	108171-26-2
Chloroalkanes C12-13	71011-12-6
Chloroalkanes	61788-76-9

Asbestos	CAS No.
Asbestos	1332-21-4
Actinolite	77536-66-4
Amosite (Grunerite)	12172-73-5
Anthophyllite	77536-67-5
Chrysotile	12001-29-5
Crocidolite	12001-28-4
Tremolite	77536-68-6

Mixture of 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-4,7-methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-4,7-methano-1H-indene or their relative compounds (alias: Chlordane or Heptachlor)	CAS No.
1,3,4,7,8,9,10,10-Octachlorotricyclo [5.2.1.0(2,6)]deca-8-ene	57-74-9
1,5,7,8,9,10,10-Heptachlorotricyclo [5.2.1.0(2,6)]deca-3,8-diene	76-44-8
rel-(1R,2S,3R,4S,6S,7S)-1,3,4,7,8,9,10,10-Octachlorotricyclo[5.2.1.0(2,6)]deca-8-ene	5103-71-9
rel-(1R,2S,3R,4R,6S,7S)-1,3,4,7,8,9,10,10-Octachlorotricyclo[5.2.1.0(2,6)]deca-8-ene	5103-74-2
1,4,4,7,8,9,10,10-Octachlorotricyclo[5.2.1.0(2,6)]deca-8-ene	5566-34-7
1,8,9,10,11,11-Hexachloro-4-Oxatetracyclo [6.2.1.0(2,7).0(3,5)]undeca-9-ene	6058-23-7

N,N'-ditolyl-p-phenylenediamine, N-tolyl-N'-xylyl-p-phenylenediamine or N,N'-dixylyl-p-phenylenediamine	CAS No.
1,4-Benzenediamine,N,N'-bis(4-methylphenyl)-	620-91-7
N,N'-bis(2-methylphenyl)benzene-1,4-diamine	15017-02-4
N,N'-Bis(methylphenyl)-1,4-benzenediamine	27417-40-9
N,N'-Bis(methylphenyl)-1,4-phenylenediamine	28726-30-9
N-tolyl-N'-xylyl-p-phenylenediamine	70290-05-0

Hexabromocyclododecane (HBCD)	CAS No.
Hexabromocyclododecane	25637-99-4
1,2,5,6,9,10-Hexabromocyclododecane	3194-55-6
α -Hexabromocyclododecane	134237-50-6
β -Hexabromocyclododecane	134237-51-7
Gamma-Hexabromocyclododecane	134237-52-8

Long-chain PFCA (perfluorocarboxylic acid, 9-14 carbons)	CAS No.
Heptadecafluoronanoic acid	375-95-1
Nonadecafluorodecanoic acid	335-76-2
Perfluoroundecanoic acid	2058-94-8
Perfluorododecanoic acid	307-55-1
Perfluorotridecanoic acid	72629-94-8
Perfluorotetradecanoic acid	376-06-7

2. Conditionally prohibited substances

Cadmium / Cadmium Compounds	CAS No.
Cadmium	7440-43-9
Cadmium oxide	1306-19-0
Cadmium sulfide	1306-23-6
Cadmium chloride	10108-64-2
Cadmium sulfate	10124-36-4

Chromium VI Compounds	CAS No.
Chromium (VI) oxide	1333-82-0
Barium chromate	10294-40-3
Calcium chromate	13765-19-0
Lead (II) chromate	7758-97-6
Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8
Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2
Sodium chromate	7775-11-3
Sodium dichromate	10588-01-9
Strontium chromate	7789-06-2
Potassium dichromate	7778-50-9
Potassium chromate	7789-00-6
Zinc chromate	13530-65-9
Pentazinc chromate octahydroxide	49663-84-5
Potassium hydroxyoctaoxodizincatedichromate	11103-86-9

Lead / Lead Compounds	CAS No.
Lead	7439-92-1
Lead (II) sulfate	7446-14-2
Lead carbonate	598-63-0
Lead (II) chromate	7758-97-6
Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8
Lead hydrocarbonate	1319-46-6
Lead acetate	301-04-2
Lead (II) acetate, trihydrate	6080-56-4
Lead phosphate	7446-27-7
Lead selenide	12069-00-0
Lead (IV) oxide	1309-60-0
Lead (II,IV) oxide	1314-41-6
Lead (II) sulfide	1314-87-0
Lead (II) oxide	1317-36-8
Lead (II) carbonate basic	1319-46-6
Lead hydroxidcarbonate	1344-36-1

Lead (II) phosphate	7446-27-7
Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2
Lead (II) titanate	12060-00-3
Lead sulfate, sulphuric acid, lead salt	15739-80-7
Lead sulphate, tribasic	12202-17-4
Lead stearate	1072-35-1

Mercury / Mercury Compounds	CAS No.
Mercury	7439-97-6
Mercuric chloride	33631-63-9
Mercury (II) chloride	7487-94-7
Mercuric sulfate	7783-35-9
Mercuric nitrate	10045-94-0
Mercuric (II) oxide	21908-53-2
Mercuric sulfide	1344-48-5

Polybrominated Biphenyls (PBBs)	CAS No.
Polybrominated Biphenyls	59536-65-1
Dibromobiphenyl	92-86-4
2-Bromobiphenyl	2052-07-5
3-Bromobiphenyl	2113-57-7
4-Bromobiphenyl	92-66-0
Tribromobiphenyl	59080-34-1
Tetrabromobiphenyl	40088-45-7
Pentabromobiphenyl	56307-79-0
Hexabromobiphenyl	59080-40-9
Hexabromo-1,1-biphenyl	36355-01-8
Firemaster FF-1	67774-32-7
Heptabromobiphenyl	35194-78-6
Octabromobiphenyl	61288-13-9
Nonabromobiphenyl	27753-52-2
Decabromobiphenyl	13654-09-6

Polybrominated Diphenyl Ethers (PBDEs)	CAS No.
Bromodiphenyl ether	101-55-3
Dibromodiphenyl ether	2050-47-7
Tribromodiphenyl ether	49690-94-0
Tetrabromodiphenyl ether	40088-47-9
Pentabromodiphenyl ether (Note: Commercially available PeBDPO is a complex reaction mixture containing a variety of brominated diphenyloxides.	32534-81-9 (CAS No. used for commercial grades of eBDPO)
Hexabromodiphenyl ether	36483-60-0
Heptabromodiphenyl ether	68928-80-3
Octabromodiphenyl ether	32536-52-0
Nonabromodiphenyl ether	63936-56-1
Decabromodiphenyl ether	1163-19-5

Perfluorooctane Sulfonates (PFOS) Compounds	CAS No.
Perfluorooctane Sulfonates (PFOS) C ₈ F ₁₇ SO ₂ X, where X = OR, NR or other derivative	-

Ozone Depleting Substances (Substances Listed in the Annexes of the Montreal Protocol) (1)		CAS No.
Annex A Group I	Trichlorofluoromethane (CFC-11)	75-69-4
	Dichlorodifluoromethane (CFC-12)	75-71-8
	Trichlorotrifluoroethane (CFC-113)	76-13-1
	Dichlorotetrafluoroethane (CFC-114)	76-14-2
	Monochloropentafluoroethane (CFC-115)	76-15-3
Annex A Group II	Bromochlorodifluoromethane (Halon-1211)	353-59-3
	Bromotrifluoromethane (Halon-1301)	75-63-8
	Dibromotetrafluoroethane (Halon-2402)	124-73-2
Annex B Group I	Chlorotrifluoromethane (CFC-13)	75-72-9
	Pentachlorofluoroethane (CFC-111)	354-56-3
	Tetrachlorodifluoroethane (CFC-112)	76-12-0
	Heptachlorofluoropropane (CFC-211)	422-78-6 135401-87-5
	Hexachlorodifluoropropane (CFC-212)	3182-26-1
	Pentachlorotrifluoropropane (CFC-213)	2354-06-5 134237-31-3

	Tetrachlorotetrafluoropropane (CFC-214)	29255-31-0
	Trichloropentafluoropropane (CFC-215)	1599-41-3
	Dichlorohexafluoropropane (CFC-216)	661-97-2
	Chloroheptafluoropropane (CFC-217)	422-86-6
Annex B Group II	Tetrachloromethane (carbon tetrachloride)	56-23-5
	1,1,1-Trichloroethane (methylchloroform)	71-55-6
Annex C Group I	Dichlorofluoromethane (HCFC-21)	75-43-4
	Chlorodifluoromethane (HCFC-22)	75-45-6
	Chlorofluoromethane (HCFC-31)	593-70-4
	Tetrachlorofluoroethane (HCFC-121)	134237-32-4
	Trichlorodifluoroethane (HCFC-122)	41834-16-6
	Dichlorotrifluoroethane (HCFC-123)	34077-87-7
	Chlorotetrafluoroethane (HCFC-124)	63938-10-3
	Trichlorofluoroethane (HCFC-131)	27154-33-2; (134237-34-6)
	Dichlorodifluoroethane (HCFC-132)	25915-78-0

Ozone Depleting Substances (Substances Listed in the Annexes of the Montreal Protocol) (2)		CAS No.
Annex C Group I	Chlorotrifluoroethane (HCFC-133)	1330-45-6
		431-07-2
	Dichlorofluoroethane (HCFC-141)	25167-88-8
	1,1-Dichloro-1-fluoroethane (HCFC-141b)	1717-00-6
	Chlorodifluoroethane (HCFC-142)	25497-29-4
	1-Chloro-1,1-difluoroethane (HCFC-142b)	75-68-3
	Chlorofluoroethane (HCFC-151)	110587-14-9
	Hexachlorofluoropropane (HCFC-221)	134237-35-7
	Hexachlorofluoropropane (HCFC-221)	134237-35-7 29470-94-8
	Pentachlorodifluoropropane (HCFC-222)	134237-36-8
	Tetrachlorotrifluoropropane (HCFC-223)	134237-37-9
	Trichlorotetrafluoropropane (HCFC-224)	134237-38-0
	Dichloropentafluoropropane (HCFC-225)	127564-92-5
	3,3-Dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca)	422-56-0
	1,3-Dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb)	507-55-1
	Chlorohexafluoropropane (HCFC-226)	134308-72-8

	Pentachlorofluoropropane (HCFC-231)	134190-48-0
	Tetrachlorodifluoropropane (HCFC-232)	134237-39-1
	Trichlorotrifluoropropane (HCFC-233)	134237-40-4
	Dichlorotetrafluoropropane (HCFC-234)	127564-83-4
	Chloropentafluoropropane (HCFC-235)	134237-41-5
	Tetrachlorofluoropropane (HCFC-241)	134190-49-1
	Trichlorodifluoropropane (HCFC-242)	134237-42-6
	Dichlorotrifluoropropane (HCFC-243)	134237-43-7
	Chlorotetrafluoropropane (HCFC-244)	134190-50-4
	Trichlorofluoropropane (HCFC-251)	134190-51-5
	Dichlorodifluoropropane (HCFC-252)	134190-52-6
	Chlorotrifluoropropane (HCFC-253)	134237-44-8
	Dichlorofluoropropane (HCFC-261)	134237-45-9
	Chlorodifluoropropane (HCFC-262)	134190-53-7
	Chlorofluoropropane (HCFC-271)	134190-54-8
	Dibromofluoromethane (HBFC-21 B2)	1868-53-7

		CAS No.
Annex C Group II	Bromodifluoromethane (HBFC-22 B1)	1511-62-2
	Bromofluoromethane (HBFC-31 B1)	373-52-4
	Tetrabromofluoroethane (HBFC-121 B4)	306-80-9
	Tribromodifluoroethane (HBFC-122 B3)	-
	Dibromotrifluoroethane (HBFC-123 B2)	354-04-1
	Bromotetrafluoroethane (HBFC-124 B1)	124-72-1
	Tribromofluoroethane (HBFC-131 B3)	-
	Dibromodifluoroethane (HBFC-132 B2)	75-82-1
	Bromotrifluoroethane (HBFC-133 B1)	421-06-7
	Dibromofluoroethane (HBFC-141 B2)	358-97-4
	Bromodifluoroethane (HBFC-142 B1)	420-47-3
	Bromofluoroethane (HBFC-151 B1)	762-49-2
	Hexabromofluoropropane (HBFC-221 B6)	-
	Pentabromodifluoropropane (HBFC-222 B5)	-
	Tetrabromotrifluoropropane (HBFC-223 B4)	-
	Tribromotetrafluoropropane (HBFC-224 B3)	-
	Dibromopentafluoropropane (HBFC-225 B2)	431-78-7

	Bromohexafluoropropane (HBFC-226 B1)	2252-78-0
	Pentabromofluoropropane (HBFC-231 B5)	-
	Tetrabromodifluoropropane (HBFC-232 B4)	-
	Tribromotrifluoropropane (HBFC-233 B3)	-
	Dibromotetrafluoropropane (HBFC-234 B2)	-
	Bromopentafluoropropane (HBFC-235 B1)	460-88-8
	Tetrabromofluoropropane (HBFC-241 B4)	-
	Tribromodifluoropropane (HBFC-242 B3)	70192-80-2
	Dibromotrifluoropropane (HBFC-243 B2)	431-21-0
	Bromotetrafluoropropane (HBFC-244 B1)	679-84-5
	Tribromofluoropropane (HBFC-251 B3)	75372-14-4
	Dibromodifluoropropane (HBFC-252 B2)	460-25-3
	Bromotrifluoropropane (HBFC-253 B1)	421-46-5
	Dibromofluoropropane (HBFC-261 B2)	51584-26-0
	Bromodifluoropropane (HBFC-262 B1)	-
	Bromofluoropropane (HBFC-271 B1)	1871-72-3

Ozone Depleting Substances (Substances Listed in the Annexes of the Montreal Protocol) (4)		CAS No.
Annex C Group III	Bromochloromethane (Halon-1011)	74-97-5
Annex E Group I	Bromomethane (methyl bromide)	74-83-9

Azocolourants and azodyes which form certain aromatic amines		CAS No.
Biphenyl-4-ylamine		92-67-1
Benzidine		92-87-5
4-chloro-o-toluidine		95-69-2
2-naphthylamine		91-59-8
o-aminoazotoluene		97-56-3
5-nitro-o-toluidine		99-55-8
4-chloroaniline		106-47-8
4-methoxy-m-phenylenediamine		615-05-4
4,4'-methylenedianiline		101-77-9
3,3'-dichlorobenzidine		91-94-1
3,3'-dimethoxybenzidine		119-90-4
3,3'-Dimethylbenzidine		119-93-7
4,4'-methylenedi-o-toluidine		838-88-0

6-methoxy-m-toluidine	120-71-8
4,4'-methylene-bis(2-chloroaniline)	101-14-4
4,4'-oxydianiline	101-80-4
4,4'-thiodianiline	139-65-1
o-toluidine	95-53-4
4-methyl-m-phenylenediamine	95-80-7
2,4,5-trimethylaniline	137-17-7
o-anisidine	90-04-0
4-amino azobenzene	60-09-3

Dibutyltin Compounds (DBT)	CAS No.
Dibutyltin oxide	818-08-6
Dibutyltin diacetate	1067-33-0
Dibutyltin dilaurate	77-58-7
Dibutyltin maleate	78-04-6

Diocetyl tin Compounds (DOT)	CAS No.
Diocetyl Tin Oxide	870-08-6
Diocetyl tin dilaurate	3648-18-8

Organostannic Compounds	CAS No.
Triphenyltin dimethyldithiocarbamate	1803-12-9
Triphenyltin fluoride; Stannane, fluorotriphenyl-	379-52-2
Triphenyltin acetate; Stannane, acetoxytriphenyl-	900-95-8
Triphenyltin chloride	639-58-7
Triphenyltin hydroxide	76-87-9
Triphenyltin chloroacetate	7094-94-2
Tributyltin methacrylate	2155-70-6
Bis(tributyltin) fumarate	6454-35-9
Tributyltin fluoride	1983-10-4
Bis(tributyltin) 2,3-dibromosuccinate	31732-71-5
Tributyltin acetate	56-36-0
Tributyltin laurate	3090-36-6
Bis(tributyltin) phthalate	4782-29-0
Tributyltin sulfamate	6517-25-5
Bis(tributyltin) maleate	14275-57-1

Tributyltinchloride	1461-22-9 7342-38-3
Dibutyltin oxide	818-08-6
Dibutyltin diacetate	1067-33-0
Dibutyltin dilaurate	77-58-7
Dibutyltin maleate	78-04-6
Dioctyl Tin Oxide	870-08-6
Dioctyltin dilaurate	3648-18-8

Polycyclic Aromatic Hydrocarbons (PAH)	CAS No.
Benzo (a) pyrene (BaP)	50-32-8
Benzo (e) pyrene (B eP)	192-97-2
Benzo (a) anthracene (BaA)	56-55-3
Chrysene (CHR)	218-01-9
Benzo (b) fluoranthene (BbFA)	205-99-2
Benzo (j) fluoranthene (BjFA)	205-82-3
Benzo (k) fluoranthene (BkFA)	207-08-9
Dibenzo (a, h) anthracene (DBAhA)	53-70-3

Perfluorooctanoic acid (PFOA), its salt and its ester	CAS No.
Perfluorooctanoic acid (PFOA)	335-67-1
Ammonium Perfluorooctanoate (APFO)	3825-26-1
Sodium Salt of Perfluorooctanoic acid	335-95-5
Potassium Salt of Perfluorooctanoic acid	2395-00-8
Silver Salt of Perfluorooctanoic acid	335-93-3
Fluoride of Perfluorooctanoic acid	335-66-0
Methyl Perfluorooctanoate	376-27-2
Ethyl Perfluorooctanoate	3108-24-5

VII. Fuji Electric's concept of exempted used for controlled substances

Some prohibited substances are excluded from application according to their use by laws and regulations. Fuji Electric also has exempted applications for "Conditionally Prohibited Substances". Fuji Electric has the following three categories of exempted applications. Whether or not the exemptions can be applied to material items supplied by suppliers is specified by the business division of Fuji Electric that requested the survey.

In some cases, the applicable expiration date may be set before the expiration date in consideration of the expiration date applicable to Fuji Electric. In this case, each business division of Fuji Electric that requested the survey will specify the applicable expiration date.

1. Application Exclusion Items Group A

This is an exempt use of Annex 3 to Directive 2011/65/EU of the European Parliament and of the Council (EU-RoHS2) and applies to all materials in this category.

Please be sure to check the website of the European Commission at the following URL for the latest contents of the exemptions use group A.

https://environment.ec.europa.eu/topics/waste-and-recycling/rohs-directive/implementation-rohs-directive_en

2. Application Exclusion Items Group B

It applies to materials that constitute Fuji Electric products that are exempt from UR-RoHS2 Annex 4, fall under this category, and are incorporated in categories 8 and 9 of EU-RoHS2 without exception, or fall under these two categories without exception.

Please be sure to check the website of the European Commission at the following URL for the latest contents of the exemptions use group B.

https://environment.ec.europa.eu/topics/waste-and-recycling/rohs-directive/implementation-rohs-directive_en

3. Application Exclusion Items Group C

It is an application (essential use) for which the use of controlled substances under the Chemical Substances Control Act is exceptionally permitted pursuant to Section 3 of the Supplementary Provisions of the Enforcement Order.

No.	Contents
PFOS or its salts for the following applications	
1	Production of Etching Agent (Limited to those used in the manufacture of compound semiconductors that enable piezoelectric filters or radio equipment to transmit and receive radio waves with a frequency of 3 megahertz or more)
2	Production of resist for Semiconductor
3	Production of Professional Photographic Film

4. Supplement to EU-RoHS2: Categories of electrical and electronic equipment to which EU-RoHS2 applies

Categories	Eligible electrical and electronic equipment	Categories	Eligible electrical and electronic equipment
1	Large household electrical appliances	7	Toys, leisure and sporting goods
2	Small household electrical appliances	8	Medical device
3	IT and telecommunications equipment	9	Monitoring and control equipment including industrial applications
4	Consumer equipment	10	Vending machine
5	Lighting equipment	11	Other electrical and electronic equipment not in category 1 - 10
6	Power tool		

[History of Revisions]

April 2013: “List of Controlled Substances”, “Application Exclusion Items”, and “Non-Content Certificate” of Guideline Edition 4.1 were separated and established as Appendix II Edition 5.0.0.

December 2016: Added of controlled substances in Appendix II, review of exemptions, and changes to Attachment 1 “Non-Content Certificate” accordingly.

Revised as 5.0.1 with the addition of references to reported substances.

December 2023: Revised to 6.0.0 along with revision to 6.0 of the Guidelines (Main Text)

December 2024: Added substances prohibited by specific countries to Annex II.

Added "Attachment 3: French Packaging Materials Mineral Oil Ink Regulations Survey Sheet"

Revised to version 6.0.1

[Revised point of version 6.0.1]

No.	Main changes	page
1	I -5. Specific country prohibited substances: New addition	3
2	III. Conditionally Prohibited Substances : Delete No16	13
3	V. List of prohibited substances in specific countries: New additions	17
4	Attachment 3: French Packaging Mineral Oil Ink Regulation Survey Sheet: New Addition	36

End of text

[Attachment 1] Non-Content Certificate

Appendix II Edition 6.0.1 Attachment 1

To: _____

Entry date	
Company name	
Address	
Section in charge	
Signature & seal of person in charge	Seal

* A person in charge is a person with the representation right of your company, or the equivalent person responsible for the contents of this certificate.

Non-Content Certificate

This is to certify that materials this company supplies to the Fuji Electric, that is, "purchases which directly constitute Fuji Electric products, such as raw materials, parts, products, equipment, subcontracted goods such as manufacturing, processing, repair, etc. (including accessories, packaging, and all other items delivered with the products), and substances suspected to remain in raw materials and parts used in manufacturing processes do not contain the following "prohibited substances" and "conditionally prohibited substances".

* Details related to "Prohibited Substances" and "Conditionally Prohibited Substances" and "Voluntarily Controlled Substances" are according to Appendix II.

Materials that certify not to contain prohibited substances and conditionally prohibited substances will be listed in the "List of Materials Subject to Non-Content Certificate", along with voluntarily controlled substances whose intentional addition is confirmed.

If prohibited substances or conditionally prohibited substances are detected in violation to the above, resulting in damage to Fuji Electric for handling the damage, we sincerely respond to it.

1. List of Prohibited Substances [Subject of Non-Content Certificate]

No.	Substance Name
1	Tributyl Tin Oxide (TBTO)
2	Certain Tributyl Tins and Triphenyl Tins
3	Polychlorinated Biphenyls (PCBs) and specified replacements
4	Polychlorinated Terphenyls (PCTs)
5	Polychloronaphthalenes (having ≥ 3 chlorine)
6	Certain Shortchain Chlorinated Paraffin(C10-C13)
7	Asbestos
8	Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)
9	Hexachlorobenzene
10	1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-exo-1,4-end-5,8-dimethanonaphthalene (alias: Aldrin)
11	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-exo-1,4-endo-5,8-dimethanonaphthalene (alias: Dieldrin)
12	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-end-1,4-end-5,8-dimethanonaphthalene (alias: Endrin)
13	1,1,1-trichloro-2,2-bis (parachlorophenyl) ethane(alias: DDT)
14	Mixture of 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-4,7-methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-4,7-methano-1H-indene or their relative compounds (alias:Chlordane or Heptachlor)
15	N,N'-ditolyl-p-phenylenediamine, N-tolyl-N'-xylyl-p-phenylenediamine or N,N'-dixylyl-p-phenylenediamine
16	2,4,6-tri-tertbutylphenol
17	Polychloro-2,2-dimethyl-3-methylidenebicyclo[2.2.1]heptane (alias: Toxaphene)
18	Dodecachloropentacyclo[5.2.1.02,6.03,9.05,8]decane(alias:Mirex)
19	2,2,2-trichloro-1,1-bis (4-chlorophenyl) ethanol (alias: Kelthane or Dicohol)
20	Hexachlorobuta-1,3-diene
21	Yellow phosphorus match
22	Benzidine and its salts
23	4-Aminobiphenyl and its salts
24	4-Nitrobiphenyl and its salts
25	Bis(chloromethyl) ether
26	β -Naphthylamine and its salts
27	Benzene containig rubber dough, in which benzene content exceeds 5% of the solvent (including diluents)
28	Dioxin group /Furan group (PCDD/PCDF)
29	Dimethyl fumarate
30	γ -Hexachlorocyclohexane (γ -HCH or Lindane)
31	α -Hexachlorocyclohexane (α -HCH)
32	β -Hexachlorocyclohexane (β -HCH)
33	Chlordecone (Kepone)
34	Pentachlorobenzene
35	Perfluorooctane sulfonyl fluoride (PFOSF)
36	Hexabromocyclododecane
37	Endosulfan
38	Pentachlorophenol
39	Tris (isopropylphenyl) phosphate (PIP (3:1))
40	Pentachlorothiophenol (PCTP)
41	Long-chain PFCA (perfluorocarboxylic acid, 9-14 carbons)
42	Perfluorohexanesulfonic acid (PFHxS) and its salts, and PFHxS-related substances
43	Methoxychlor
44	Declorane Plus
45	UV-328 (2-(2H-1,2,3 benzotriazol-2-yl)-4,6-di-tert-pentylphenol)

Appendix II Edition 6.0.1 Attachment 1

2. List of Conditionally Prohibited Substances [Subject of Non-Content Certificate]

No.	Substance Name	Reportable Applications	Threshold
1	Cadmium / Cadmium compounds	(i) Batteries	< 10ppm
		(ii) Packaging: Total amount of heavy metals (lead, mercury, cadmium, chromium VI)	Total < 100ppm
		(iii) All except (i) and (ii)	In homogeneous materials
		*Application exclusion is according to Appendix II	< 100ppm
2	Chromium VI compounds	(i) Packaging: Total amount of heavy metals (lead, mercury, cadmium, chromium VI)	Total < 100ppm
		(ii) All except (i)	In homogeneous materials
		*Application exclusion is according to Appendix II	< 1000ppm
3	Lead / lead compounds	(i) Electrical wires and cables coated by thermal setting and thermoplastic resin coatings	In surface coatings < 300ppm
		(ii) Batteries	< 40ppm
		(iii) Packaging: Total amount of heavy metals (lead, mercury, cadmium, chromium VI)	Total < 100ppm
		(iv) All except (i) to (iii)	In homogeneous materials
		*Application exclusion is according to Appendix II	< 1000ppm
4	Mercury / mercury compounds	(i) Batteries	< 1ppm
		(ii) Packaging: Total amount of heavy metals (lead, mercury, cadmium, chromium VI)	Total < 100ppm
		(iii) All except for (i) and (ii)	Intentionally added / In homogeneous materials < 1000ppm
5	Polybrominated biphenyls (PBBs)	All	Intentionally added / In homogeneous materials < 1000ppm
6	Polybrominated diphenyl ethers (PBDEs)	All	Intentionally added / In homogeneous materials < 1000ppm
7	Perfluorooctane sulfonate (PFOS)	All	Intentionally added
8	Ozone depleting substances (Substances listed in Annexes of the Montreal Protocol on substances that deplete the ozone layer)	(i) All (In products) (ii) Used for washing/foaming 20 substances listed in Annexes A, B	—
9	Azocolourants and azodyes which form certain aromatic amines (*) * Designated substance in Appendix II	Textiles and leather	As formed aromatic amines < 30ppm
10	Dibutyl-tin compound (DBT)	Intended use for mass consumption	As tin element < 1000ppm
11	Diocetyl-tin compound (DOT)	Intended use for mass consumption	As tin element < 1000ppm
12	Tris phosphate (2,3-dibromopropyl)	Textiles	Intentionally added
13	Tri(1-aziridine)-phosphine oxide	Textiles	Intentionally added
14	Organic tin compound	Marine products	As tin element < 2500ppm
15	Phthalate esters (4 kinds) DEHP, BBP, DBP, DIBP	1) Use in parts of electrical equipment that come in contact with skin for a long period of time: Immediate prohibition. 2) Use in components of products subject to RoHS: Prohibited with a time limit."	Intentionally added/per homogeneous material < 1000ppm
16	Reaction products with benzeneamine, N-phenyl, styrene and 2,4,4 trimethylpentene (BNST)	All (except for rubber other than tires)	Intentionally added
17	Specific polycyclic aromatic hydrocarbons (PAHs)	Use in areas that come into prolonged contact with the oral cavity of human skin	Intentionally added
18	PFOA and its ssIts	All	Intentionally added
19	Formaldehyde	Use on wood	Intentionally added
20	Halogenated flame retardants	Enclosures and stands of electronic displays including TV's, monitors and digital signage displays with screens larger than 100cm ²	Intentionally added

List of Target Materials for the Non-Content Certificate

[Non-Content Certificate] Prohibited Substances and Conditionally Prohibited Substances

- For the material marked "○" in the column "(1) Contained or not" in the table below, prove the non-content.
- For materials for which we cannot prove the non-content of "x" in the column "(1) Contained or not" in the table below, we report that the substances listed in the column "(2) Contained materials" are included.

[Surveillance] Voluntry controlled substances *This does not restrict intentional use.

- Report the intentional inclusion of substances listed in column (3) Contained substances in the table below. (*Enter the No. of the subject substance.)

[illegible]

* If more space is needed, add extra lines.

[Attachment 2] Reported Data on Contained Substances

The following format data is used as “[Attachment 2] Reported Data on Contained Substances”. Please download it from the provided websites.

- (1) For suppliers who deliver molded products to Fuji Electric
chemSHERPA (If you have JAMP AIS -> Please conduct a new survey)
- (2) For suppliers who deliver substances or mixtures to Fuji Electric
chemSHERPA (If you have JAMP MSDSplus -> Please conduct a new survey)

[Source Links]

chemSHERPA <https://chemsherpa.net/tool>

[Attachment3] French Packaging Materials Mineral Oil Ink Regulations Survey Sheet

[illegible]