Fuji Electric
Innovating Energy Technology

Fuji Electric's Green Procurement Guideline

Appendix II
List of Controlled Substances,
Non-Content Certificate and Reported Data on Contained Substances
Edition 5.0.1

ECOLOGY
Fuji Electric

December 2016

Fuji Electric Co., Ltd.

Contents

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 Guideline" in Fuji Electric's Green Procurement Guideline (this document) 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 "III. 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. Application Exclusion Items Group A" to "VIII. Application Exclusion Items Group C" in this document. For more information about particular substances, refer to "IV. List of Conditionally Prohibited Substances".

3. Mandatory reporting substances

Substances that must be reported for Fuji Electric has determined that the status of its content in a product must be understood according to domestic and overseas laws, regulations, and treaties, and industry policies.

4. Declarable substances

Fuji Electric needs to understand the content status of these substances in products according domestic and overseas laws, regulations, and treaties, and industry trends. There are the following two groups, and each business department of Fuji Electric specifies which group is applied.

(1) IEC 62474 (JIG) List of declarable substances

Regarding particular substances, refer to the IEC 62474 or JGPSSI homepage.

- IEC 62474: http://std.iec.ch/iec62474/iec62474.nsf/welcome?openpage
- JGPSSI: http://www.db1.co.jp/jeita_eps/green/

(2) JAMP controlled substances: Regarding particular substances, refer to the JAMP homepage (http://www.jamp-info.com/).

(3) chemSHERPA controlled substances
Regarding particular substances, refer to the chemSHERPA homepage (https://chemsherpa.net/chemSHERPA/).

* Regarding objective substances, the latest above standards and organizations shall have priority. Moreover, there are substances that overlap between two of the above categories such as with "Prohibited Substances", so please report the content status separately. Regarding the format for reporting, refer to "[Attachment 2] Reported Information on Contained Substances" in this document.

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

- JGPSSI (Japan Green Procurement Survey Standardization Initiative)
  This was established voluntarily by companies in the Japanese electric and electronic industries, and is a voluntary council for reducing the amount of manpower needed for green procurement surveys and for improving answer quality by standardizing the survey object substance list and survey answer format.
  JIG was taken over by International Standard IEC 62474 and was developmentally dissolved at the end of May 2012. The activities including chemical substance list revisions and tools were transferred to the subcommittee domestic VT62474 in the IEC/TC111 domestic committee.

- JIG (The Joint Industry Guide for Material Composition Declaration For Electronic Products)
  This is a common standard for "Chemical substances that must be controlled" and "Survey answer format for information distribution" that were determined by JGPSSI, Electronics Industries Association (currently the Consumer Electronics Association), European Information and Communication Technology Industry Association (currently DIGITALEUROPE) in order to improve the efficiency of information distribution among companies in electric and electronic equipment industries related to chemical substances contained in products and parts. JIG-101 Ed4.1 is the final edition and was taken over by IEC 62474, which was issued in March of 2012. In addition, JIG-201 Ed1.1 was issued in August of 2012, which is the guideline for supply chains for reporting chemical substances used in packaging for sales and distribution of electronic products.

- IEC 62474 (Material Declaration for Products of and for the Electrotechnical Industry)
  This is a standard related to "Chemical substances that must be controlled" and "Survey answer format for information distribution" by the international standardization organization that handles electrotechnology, electronic engineering, and related technologies.

- 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".

- chemSHERPA (A scheme that facilitates sharing information on chemical substances in products)
  This is a scheme created by integrating the JAMP and the former JGPSSI initiated by METI. It is a common scheme for handling information across a supply chain to help properly manage chemical substances contained in products, and to continuously respond to ever-increasing regulations.

II. Fuji Electric Policy for Application Exclusion Items

Among the substances that are prohibited, there are some items which can be excluded from application according to laws and regulations depending on the usage. Fuji Electric also sets application exclusions for some items in the "Conditionally Prohibited Substances". Fuji Electric's application exclusion items are sorted into the following three categories. In addition, whether or not it is possible to apply the exclusion to a delivered material from a supplier is determined by each business department of Fuji Electric that requests a survey.

1. Application Exclusion Items Group A

Usages from "VI.Application Exclusion Items Group A" according to the applications exempted from the restriction in ANNEX III of DIRECTIVE 2011/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (hereafter EU-RoHS2). This applies to all materials that apply to the usages in "VI. Application Exclusion Items Group A".

Regarding the applicable effective period, in consideration of the period that applies to Fuji Electric, it will be specified prior to the 12-month effective period of EU-RoHS2.

Moreover, when an application exclusion item is used in a product that applies to Categories 8 and 9 of EU-RoHS2, it may differ from the period shown in the table.

2. Application Exclusion Items Group B

Usages from "VII. Application Exclusion Items Group B" according to the applications exempted from the restriction in ANNEX IV of EU-RoHS2. This applies to usages of "VII. Application Exclusion Items Group B", and also applies to Fuji Electric products that are targets of Categories 8 and 9 of EU-RoHS2 without exemption, and to materials that configure Fuji Electric products embedded in items that relate to these two categories only without exemption.

Fuji Electric does not specify its own applicable effective period.

Regarding the applicable effective period, in consideration of the period that applies to Fuji Electric, it will be specified prior to the 12-month effective period of EU-RoHS2.

3. Application Exclusion Items Group C

Among the controlled substances according to the Chemical Substances Control Law, these are exempted allowable usages according to Article 9 of the Enforcement Order of this law (essential use). Refer to "VII. Application Exclusion Items Group C".

4. EU-RoHS2 Supplement: Categories of the Eclectic and Electronic Equipment that apply to EU-RoHS2

Category	Target Electric/Electronic Equipment	Category	Target Electric/Electronic Equipment
1	Large household appliances	7	Toys, leisure and sports equipment
2	Small household appliances	8	Medical devices
3	IT and telecommunication equipment	9	Monitoring and control instruments including industrial monitoring and control instruments
4	Consumer equipment	10	Automatic dispensers
5	Lighting equipment	11	Other EEE not covered by any of the categories above
6	Electrical and electronic tools		

III. 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 "IX. Controlled Substance Details"	-	- ANNEX XVII of REACH Regulation (EC) No 1907/2006 (hereafter, REACH Regulation (Restricted Substances)	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 "IX. Controlled Substance Details"	-	- Chemical Substance Control Law (Class I Specified Chemical Substance) - Stockholm convention on Persistent Organic Pollutants (hereafter, POPs Treaty) (Restricted Usage/Production) - REACH Regulation (Restricted Substances) - 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 "IX. Controlled Substance Details"	-	- REACH Regulation (Restricted Substances)	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 (At least one chlorine atom) * For details, refer to "IX. 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 "IX. Controlled Substance Details"	-	- Norwegian Product Regulations FOR-2004-06-01-922 - Swiss Ordinance on Reduction of Risk from Chemical Products (ORRChem)	Plasticizer for PVC, flame retardant	4
7	Asbestos * For details, refer to "IX. Controlled Substance Details"	-	- Industrial Safety & Health Act (Restricted Substances) - REACH Regulation (Restricted Substances) - 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	- 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	- 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	- 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	- Chemical Substance Control Law (Class I Specified Chemical Substance) - POPs Treaty (Restricted Usage/Production)	Insecticide	1
13	1,1,1-trichloro-2,2-bis (p arachlorophenyl) ethane(alias: DDT)	50-29-3	- 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 "IX. Controlled Substance Details"	-	- 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 "IX. Controlled Substance Details"	-	Chemical Substance Control Law (Class I Specified Chemical Substance)	Rubber aging inhibiter, styernebutadiene rubber	1
16	2,4,6-tri-tertbutylphenol	732-26-3	Chemical Substance Control Law (Class I Specified Chemical Substance)	Oxidation inhibiter	1
17	Polychloro-2,2-dimethyl-3-methylidenebicyclo [2.2.1] heptane (alias: Toxaphene)	8001-35-2	- 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	- 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: Kelsen or Dikohol)	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 inhibiter	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)	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	- 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	- Chemical Substance Control Law (Class I Specified Chemical Substance) - POPs Treaty (Restricted Usage/Production)	Insecticide	4
34	Pentachlorobenzene	608-93-5	- 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 "IX. Controlled Substance Details"	25637-99-4	Chemical Substance Control Law (Class I Specified Chemical Substance)	Flame retardant	5 . 0 . 1
37	Endosulfan	115-29-7	Chemical Substance Control Law (Class I Specified Chemical Substance)	Pesticide	5 . 0 . 1
38	Pentachlorophenol	87-86-5	Chemical Substance Control Law (Class I Specified Chemical Substance)	Preservative, insecticide, fungicide, and animal glue	5 . 0 . 1

IV. List of Conditionally Prohibited Substances

No.	Substance Name	CAS No.	Major Applicable Laws/Regulations	Reportable Applications	Threshold	Examples of Use	Edition
1	Cadmium / Cadmium compounds * For details, refer to "IX. Controlled Substance Details"	-	- DIRECTIVE 2006/66/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (hereafter, EU Battery Directive 2006/66/EC) - Korean Quality Management and Safety Control of Industrial Products Act (hereafter, Korean Battery Directive) - UROPEAN PARLIAMENT AND COUNCIL DIRECTIVE 94/62/EC (hereafter, EU Packaging Directive) - REACH Regulation (Restricted Substances) - ANNEX III of DIRECTIVE 2011/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (hereafter EU-RoHS2)	(i) Batteries	< 10ppm	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	5.0.0
				(ii) Packaging: Total amount of heavy metals (lead, mercury, cadmium, chromium VI)	Total < 100ppm		
				(iii) All except (i) and (ii) (In application exclusion items groups A and B)	In homogeneous materials < 100ppm		
2	Chromium VI compounds * For details, refer to "IX. Controlled Substance Details"		- EU Packaging Directive - EU-RoHS2	(i) Packaging: Total amount of heavy metals (lead, mercury, cadmium, chromium VI)	Total < 100ppm	Chroming, pigment, catalyst, plating, paint drying, anticorrosion surface treatments, dyes, surface treatments, paint, paint adhesion reinforcement, anti-corrosion, ink	1
				(ii) All except (i) (In application exclusion items groups A and B)	In homogeneous materials < 1000ppm		
3	Lead / lead compounds * For details, refer to "IX. Controlled Substance Details"		- US/CA Proposition 65 Case law - EU Battery Directive - Korean Battery Directive - Brazilian Battery Directive Resolution No.401 - EU Packaging Directive - EU-RoHS2	(i) Electrical wires and cables coated by thermal setting and thermoplastic resin coatings	In surface coatings < 300ppm	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
				(ii) Batteries	< 40ppm		
				(iii) Packaging: Total amount of heavy metals (lead, mercury, cadmium, chromium VI)	Total < 100ppm		
				(iv) All except (i) to (iii) (In application exclusion items groups A and B)	In homogeneous materials < 1000ppm		

No.	Substance Name	CAS No.	Major Applicable Laws/Regulations	Reportable Applications	Threshold	Examples of Use	Edition
4	Mercury / mercury compounds * For details, refer to "IX. Controlled Substance Details"	-	- EU Battery Directive - Korean Battery Directive - China QZHG 1997 No. 4: Regulation on mercury content limitation for batteries - EU Packaging Directive - EU-RoHS2 - REACH Regulation (Restricted Substances) - Minamata Convention on Mercury	(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 "IX. Controlled Substance Details"	-	EU-RoHS2	All	Intentionally added / In homogeneous materials < 1000ppm	Flame retardant	1
6	Polybrominated diphenyl ethers (PBDEs) * For details, refer to "IX. Controlled Substance Details"	-	EU-RoHS2	All	Intentionally added / In homogeneous materials < 1000ppm	Flame retardant	1
7	Perfluorooctane sulfonate (PFOS) * For details, refer to "IX. Controlled Substance Details"	-	- 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	Reportable Applications	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 "IX. Controlled Substance Details"	-	- REGULATION (EC) No 2037/2000 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on substances that deplete the ozone layer (EC) No2037/2000 - 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 "IX. Controlled Substance Details"	-	REACH Regulation (Restricted Substances)	Textiles and leather	As formed aromatic amines < 30ppm	Colorants, pigment, rubber antioxidants, dyes	4.1
10	Dibutyl-tin compound (DBT) * For details, refer to "IX. Controlled Substance Details"	-	REACH Regulation (Restricted Substances)	Intended use for mass consumption	As tin element < 1000ppm	Stabilizer for PVC, curing catalyst for silicone resin and urethane resin	4.1
11	Dioctyl-tin compound (DOT) * For details, refer to "IX. Controlled Substance Details"	-	REACH Regulation (Restricted Substances)	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)	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)	Textiles	Intentionally added	Flame retardant for plastics and synthetic fibers	4.1
14	Organic tin compound * For details, refer to "IX. 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	Reportable Applications	Threshold	Examples of Use	Edition
15	Phthalate esters (4 types) - Bis (2-ethylhexyl) phthalate DEHP - Butyl benzyl phthalate BBP - Dibutyl phthalate DBP - Diisobutyl phthalate DIBP	 117-81-7 85-68-7 84-74-2 84-69-5	EU-RoHS2	1) Usage in portions of electrical equipment that contact the skin for long periods - Prohibited period: Immediate 2) Usage as constructional element of RoHS target products (Excluding battery materials) - Prohibited period Applications in RoHS Categories 1 to 7, 10, and 11: July 22, 2018 Applications in RoHS Categories 8 and 9: July 22, 2020	Intentionally added / In homogeneous materials < 1000ppm	Plasticizer	5.0.1
16	Benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene (BNST)	68921-45-9	CEPA	All (Excluding rubber other than tires)	Intentionally added	Additive for rubber / lubricants (Antioxidant)	5.0.1
17	Polycyclic aromatic hydrocarbons (PAHs) * For details, refer to “IX. Controlled Substance Details”		REACH Regulation (Restricted Substances)	Usage in portions that contact human skin / inside of mouth for long periods	Intentionally added	Pigment for rubber / lubricants	5.0.1
18	Perfluorooctanoic acid (PFOA) and individual salts and esters of PFOA * For details, refer to “IX. Controlled Substance Details”		Norwegian Regulations	Usage in elements / parts that comprise Fuji Electric products	Intentionally added	Antistatic agent for films and plastics	5.0.1
19	Formaldehyde	50-00-0	California Code of Regulations	Usage in wood products	Intentionally added	Preservative	5.0.1

V. Mandatory Reporting Substances

No.	Substance Name	CAS No.	Major Applicable Laws/Regulations	Usage Conditions	Threshold	Examples of Use	Edition
1	Red phosphorus	7723-14-0	Self-regulation	When used, a coating must be applied.	Intentionally added	Flame retardant	5.0.1

VI. Application Exclusion Items Group A

No.		Exclusion Item	Applicable Date	Our Date
1		Mercury in single capped (compact) fluorescent lamps not exceeding (per burner):		
	1(a)	For general lighting purposes < 30 W: 5 mg/burner	12/31/2011	Prohibited
		For general lighting purposes < 30 W: 3.5 mg/burner	12/31/2011	Prohibited
		For general lighting purposes < 30 W: 2.5 mg/burner	Under review by EU	To be set
	1(b)	For general lighting purposes ≥ 30 W and < 50 W: 5 mg/burner	12/31/2011	Prohibited
		For general lighting purposes ≥ 30 W and < 50 W: 3.5 mg/burner	Under review by EU	To be set
	1(c)	For general lighting purposes > 50 W and < 150 W: 5 mg/burner	Under review by EU	To be set
	1(d)	For general lighting purposes >150 W: 15 mg/burner	Under review by EU	To be set
	1(e)	For general lighting purposes with circular or square structural shape and tube diameter ≤ 17 mm: no limitation	12/31/2011	Prohibited
		For general lighting purposes with circular or square structural shape and tube diameter ≤ 17 mm: 7 mg/burner	Under review by EU	To be set
	1(f)	For special purposes: 5 mg/burner	Under review by EU	To be set
	1(g)	For general lighting purposes < 30 W with a lifetime equal or above 20,000 h: 3.5 mg/burner	12/31/2017	12/31/2016
2(a)		Mercury in double-capped linear fluorescent lamps for general lighting purposes not exceeding (per lamp):		
	2(a)1	Tri-band phosphor with normal lifetime and a tube diameter < 9 mm (e.g. T2): 5 mg/lamp	12/31/2011	Prohibited
		Tri-band phosphor with normal lifetime and a tube diameter < 9 mm (e.g. T2): 4 mg/lamp	Under review by EU	To be set
	2(a)2	Tri-band phosphor with normal lifetime and a tube diameter ≥ 9 mm and ≤ 17 mm (e.g. T5): 5 mg/lamp	12/31/2011	Prohibited
		Tri-band phosphor with normal lifetime and a tube diameter ≥ 9 mm and ≤ 17 mm (e.g. T5): 3 mg/lamp	Under review by EU	To be set
	2(a)3	Tri-band phosphor with normal lifetime and a tube diameter > 17 mm and ≤ 28 mm (e.g. T8): 5 mg/lamp	12/31/2011	Prohibited
		Tri-band phosphor with normal lifetime and a tube diameter > 17 mm and ≤ 28 mm (e.g. T8): 3.5 mg/lamp	Under review by EU	To be set
	2(a)4	Tri-band phosphor with normal lifetime and a tube diameter > 28 mm (e.g. T12): 5 mg/lamp	12/31/2012	Prohibited
		Tri-band phosphor with normal lifetime and a tube diameter > 28 mm (e.g. T12): 3.5 mg/lamp	Under review by EU	To be set
	2(a)5	Tri-band phosphor with long lifetime (≥ 25,000 h): 8 mg/lamp	12/31/2011	Prohibited
		Tri-band phosphor with long lifetime (≥ 25,000 h): 5 mg/lamp	Under review by EU	To be set

No.		Exclusion Item	Applicable Date	Our Date
2(b)		Mercury in other fluorescent lamps not exceeding (per lamp):		
	2(b)1	Linear halophosphate lamps with tube diameter> 28 mm (e.g. T10 and T12): 10 mg/lamp	4/13/2012	Prohibited
	2(b)2	Non-linear halophosphate lamps (all diameters): 15 mg/lamp	4/13/2016	Prohibited
	2(b)3	Non-linear tri-band phosphor lamps with tube diameter > 17 mm (e.g. T9): No limitation	12/31/2011	Prohibited
		Non-linear tri-band phosphor lamps with tube diameter > 17 mm (e.g. T9): 15 mg/lamp	Under review by EU	To be set
	2(b)4	Lamps for other general lighting and special purposes (e.g. induction lamps): No limitation	12/31/2011	Prohibited
		Lamps for other general lighting and special purposes (e.g. induction lamps): 15 mg/lamp	Under review by EU	To be set
3		Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes not exceeding (per lamp):		
	3(a)	Short length (≤ 500 mm): No limitation	12/31/2011	Prohibited
		Short length (≤ 500 mm): 3.5 mg/lamp	Under review by EU	To be set
	3(b)	Long length (> 500 mm and ≤ 1 500 mm): No limitation	12/31/2011	Prohibited
		Long length (> 500 mm and ≤ 1 500 mm): 5 mg/lamp	Under review by EU	To be set
	3(c)	Long length (> 1 500 mm): No limitation	12/31/2011	Prohibited
		Long length (> 1 500 mm): 13 mg/lamp	Under review by EU	To be set
4(a)		Other low pressure discharge lamps (per lamp): No limitation	12/31/2011	Prohibited
		Other low pressure discharge lamps (per lamp): 15 mg/lamp	Under review by EU	To be set
4(b)		Mercury in High Pressure Sodium (vapor) lamps for general lighting purposes not exceeding (per burner) in lamps with improved color rendering index Ra > 60:		
	4bI	P ≤ 155 W: No limitation	12/31/2011	Prohibited
		P ≤ 155 W: 25 mg/burner	Under review by EU	To be set
	4bII	155 W < P ≤ 405 W: No limitation	12/31/2011	Prohibited
		155 W < P ≤ 405 W: 30 mg/burner	Under review by EU	To be set
	4bIII	P > 405 W: No limitation	12/31/2011	Prohibited
		P > 405 W: 40 mg/burner	Under review by EU	To be set

No.		Exclusion Item	Applicable Date	Our Date
4(c)		Mercury in other High Pressure Sodium (vapor) lamps for general lighting purposes not exceeding (per burner):		
	4cI	P ≤ 155 W: No limitation	12/31/2011	Prohibited
		P ≤ 155 W: 25 mg/burner	Under review by EU	To be set
	4cII	155 W < P ≤ 405 W: No limitation	12/31/2011	Prohibited
		155 W < P ≤ 405 W: 30 mg/burner	Under review by EU	To be set
	4cIII	405 W < P: No limitation	12/31/2011	Prohibited
		405 W < P: 40 mg/burner	Under review by EU	To be set
4(d)		Mercury in High Pressure Mercury (vapor) lamps (HPMV)	4/13/2015	Prohibited
4(e)		Mercury in metal halide lamps (MH)	Under review by EU	To be set
4(f)		Mercury in other discharge lamps for special purposes not specifically mentioned in this Annex	Under review by EU	To be set
4(g)		Mercury in hand crafted luminous discharge tubes used for signs, decoration or architecture and specialist lighting and light-artwork shall be limited as follows: (a) 20 mg per electrode pair +0.3 mg per tube length in 1 cm, but not more than 80 mg, for outdoor applications and indoor applications exposed to temperatures below 20°C. (b) 15 mg per electrode pair +0.24 mg per tube length in 1 cm, but not more than 80 mg, for all other indoor applications.	12/31/2018	12/31/2017
5(a)		Lead in glass of cathode ray tubes	7/21/2016	Prohibited
5(b)		Lead in glass of fluorescent tubes not exceeding 0.2% by weight	Under review by EU	To be set
6(a)		Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0.35% lead by weight	Under review by EU	To be set
6(b)		Lead as an alloying element in aluminum containing up to 0,4 % lead by weight	Under review by EU	To be set
6(c)		Copper alloy containing up to 4 % lead by weight	Under review by EU	To be set
7(a)		Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead)	Under review by EU	To be set
7(b)		Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signaling, transmission, and network management for telecommunications	7/21/2016	Prohibited
7cI		Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound	Under review by EU	To be set
7cII		Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher	Under review by EU	To be set

No.	Exclusion Item	Applicable Date	Our Date
7cIII	Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or less	1/1/2013	Prohibited
	Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or less, which may be used in spare parts for EEE placed on the market before January 1, 2013	None set	None set
7cIV	Lead in PZT based dielectric ceramic materials for capacitors being part of integrated circuits or discrete semiconductors	Under review by EU	To be set
8(a)	Cadmium and its compounds in one shot pellet type thermal cut-offs	1/1/2012	Prohibited
	Cadmium and its compounds in one shot pellet type thermal cut-offs, which may be used in spare parts for EEE placed on the market before January 1, 2012	None set	None set
8(b)	Cadmium and its compounds in one shot pellet type thermal cut-offs	Under review by EU	To be set
9	Hexavalent chromium as an anticorrosion agent of the carbon steel cooling system in absorption refrigerators up to 0.75% by weight in the cooling solution	Under review by EU	To be set
9(b)	Lead in bearing shells and bushes for refrigerant-containing compressors for heating, ventilation, air conditioning and refrigeration (HVACR) applications	Under review by EU	To be set
11(a)	Lead used in C-press compliant pin connector systems	9/25/2010	Prohibited
	Lead used in C-press compliant pin connector systems, which may be used in spare parts for EEE placed on the market before September 24, 2010	None set	None set
11(b)	Lead used in other than C-press compliant pin connector systems	1/1/2013	Prohibited
	Lead used in other than C-press compliant pin connector systems, which may be used in spare parts for EEE placed on the market before January 1, 2013	None set	None set
12	Lead as a coating material for the thermal conduction module C-ring	9/25/2010	Prohibited
	Lead as a coating material for the thermal conduction module C-ring, which may be used in spare parts for EEE placed on the market before September 24, 2010	None set	None set
13(a)	Lead in white glasses used for optical applications	Under review by EU	To be set
13(b)	Cadmium and lead in filter glasses and glasses used for reflectance standards	Under review by EU	To be set

No.	Exclusion Item	Applicable Date	Our Date
14	Lead in solders consisting of two elements for the connection between the pins and the package of microprocessors with a lead content of more than 80% and less than 85% by weight	1/1/2011	Prohibited
	Lead in solders consisting of two elements for the connection between the pins and the package of microprocessors with a lead content of more than 80% and less than 85% by weight, which may be used in spare parts for EEE placed on the market before January 1, 2011	None set	None set
15	Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages	Under review by EU	To be set
16	Lead in linear incandescent lamps with silicate coated tubes	9/1/2013	Prohibited
17	Lead halide as radiant agent in high intensity discharge (HID) lamps used for professional reprography applications	7/21/2016	Prohibited
18(a)	Lead as activator in the fluorescent powder (1% lead by weight or less) of discharge lamps when used as speciality lamps for diazoprinting reprography, lithography, insect traps, photochemical and curing processes containing phosphors such as SMS $(Sr,Ba)_2MgSi_2O_7$:Pb)	1/1/2011	Prohibited
18(b)	Lead as activator in the fluorescent powder (1 % lead by weight or less) of discharge lamps when used as sun tanning lamps containing phosphors such as BSP ($BaSi_2O_5$:Pb)	Under review by EU	To be set
19	Lead with PbBiSn-Hg and PbInSn-Hg in specific compositions as main amalgam and with PbSn-Hg as auxiliary amalgam in very compact energy saving lamps (ESL)	6/1/2011	Prohibited
20	Lead oxide in glass used for bonding front and rear substrates of flat fluorescent lamps used for Liquid Crystal Displays (LCDs)	6/1/2011	Prohibited
21	Lead and cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses	Under review by EU	To be set
23	Lead in finishes of fine pitch components other than connectors with a pitch of 0.65 mm and less, which may be used in spare parts for EEE placed on the market before September 24, 2010	—	Prohibited
24	Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors	Under review by EU	To be set
25	Lead oxide in surface conduction electron emitter displays (SED) used in structural elements, notably in the seal frit and frit ring	7/21/2016	Prohibited
26	Lead oxide in the glass envelope of black light blue lamps	7/21/2016	Prohibited

No.	Exclusion Item	Applicable Date	Our Date
29	Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC	Under review by EU	To be set
30	Cadmium alloys as electrical/mechanical solder joints to electrical conductors located directly on the voice coil in transducers used in high-powered loudspeakers with sound pressure levels of 100 dB (A) and more	7/21/2016	Prohibited
31	Lead in soldering materials in mercury free flat fluorescent lamps (which, e.g. are used for liquid crystal displays, design or industrial lighting)	7/21/2016	Prohibited
32	Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes	Under review by EU	To be set
33	Lead in solders for the soldering of thin copper wires of 100 µm diameter and less in power transformers	7/21/2016	Prohibited
34	Lead in cermet-based trimmer potentiometer elements	Under review by EU	To be set
37	Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body	Under review by EU	To be set
38	Cadmium and cadmium oxide in thick film pastes used on aluminum bonded beryllium oxide	7/21/2016	Prohibited
39	Cadmium in color converting II-VI LEDs (< 10 µg Cd per mm2 of light-emitting area) for use in solid state illumination or display systems	7/1/2014	Prohibited
40	Cadmium in photoresistors for analogue optocouplers applied in professional audio equipment	12/31/2013	Prohibited
41	Lead in solders and termination finishes of electrical and electronic components and finishes of printed circuit boards used in ignition modules and other electrical and electronic engine control systems, which for technical reasons must be mounted directly on or in the crankcase or cylinder of hand-held combustion engines (classes SH:1, SH:3 of Directive 97/68/EC of the European Parliament and of the Council)	12/31/2018	12/31/2017

VII. Application Exclusion Items Group B

No.	Exclusion Item	Applicable Date	Our Date
Equipment utilizing or detecting ionizing radiation			
1	Lead, cadmium and mercury in detectors for ionizing radiation.		
2	Lead bearings in X-ray tubes.		
3	Lead in electromagnetic radiation amplification devices: micro-channel plate and capillary plate.		
4	Lead in glass frit of X-ray tubes and image intensifiers and lead in glass frit binder for assembly of gas lasers and for vacuum tubes that convert electromagnetic radiation into electrons.		
5	Lead in shielding for ionizing radiation.		
6	Lead in X-ray test objects.		
7	Lead stearate X-ray diffraction crystals.		
8	Radioactive cadmium isotope source for portable X-ray fluorescence spectrometers.		
Sensors, detectors and electrodes			
1a	Lead and cadmium in ion selective electrodes including glass of pH electrodes.		
1b	Lead anodes in electrochemical oxygen sensors.		
1c	Lead, cadmium and mercury in infra-red light detectors.		
1d	Mercury in reference electrodes: low chloride mercury chloride, mercury sulphate and mercury oxide.		
Others			
9	Cadmium in helium-cadmium lasers.		
10	Lead and cadmium in atomic absorption spectroscopy lamps.		
11	Lead in alloys as a superconductor and thermal conductor in MRI.		
12	Lead and cadmium in metallic bonds to superconducting materials in MRI and SQUID detectors.	6/30/ 2021	6/30/2020
13	Lead in counterweights.		
14	Lead in single crystal piezoelectric materials for ultrasonic transducers.		
15	Lead in solders for bonding to ultrasonic transducers.		
16	Mercury in very high accuracy capacitance and loss measurement bridges and in high frequency RF switches and relays in monitoring and control instruments not exceeding 20 mg of mercury per switch or relay.		
17	Lead in solders in portable emergency defibrillators.		
18	Lead in solders of high performance infrared imaging modules to detect in the range 8-14 μm.		
19	Lead in Liquid crystal on silicon (LCoS) displays.		

No.	Exclusion Item	Applicable Date	Our Date
20	Cadmium in X-ray measurement filters		
21	Cadmium in phosphor coatings in image intensifiers for X-ray images	12/31/2019	12/31/2018
	Cadmium which may be used in spare parts for X-ray systems placed on the EU market before January 1, 2020		
22	Lead acetate marker for use in stereotactic head frames for use with CT and MRI and in positioning systems for gamma beam and particle therapy equipment.	6/30/2021	6/30/2020
23	Lead as an alloying element for bearings and wear surfaces in medical equipment exposed to ionizing radiation.	6/30/2021	6/30/2020
24	Lead enabling vacuum tight connections between aluminum and steel in X-ray image intensifiers.	12/31/2019	12/31/2018
25	Lead in the surface coatings of pin connector systems requiring nonmagnetic connectors which are used durably at a temperature below -20°C under normal operating and storage conditions.	6/30/2021	6/30/2020
26	Lead in the following applications that are used durably at a temperature below -20°C under normal operating and storage conditions: (a) solders on printed circuit boards; (b) termination coatings of electrical and electronic components and coatings of printed circuit boards; (c) solders for connecting wires and cables; (d) solders connecting transducers and sensors.	6/30/2021	6/30/2020
27	Lead in — solders, — termination coatings of electrical and electronic components and printed circuit boards, — connections of electrical wires, shields and enclosed connectors, which are used in (a) magnetic fields within the sphere of 1 m radius around the isocenter of the magnet in medical magnetic resonance imaging equipment, including patient monitors designed to be used within this sphere, or (b) magnetic fields within 1 m distance from the external surfaces of cyclotron magnets, magnets for beam transport and beam direction control applied for particle therapy.	6/30/2020	6/30/2019
28	Lead in solders for mounting cadmium telluride and cadmium zinc telluride digital array detectors to printed circuit boards.	12/31/2017	12/31/2016

No.	Exclusion Item	Applicable Date	Our Date
29	Lead in alloys, as a superconductor or thermal conductor, used in cryo-cooler cold heads and/or in cryo-cooled equipotential bonding systems, in medical devices (Category 8) and/or in industrial monitoring and control instruments.	6/30/2021	6/30/2020
30	Hexavalent chromium in alkali dispensers used to create photocathodes in X-ray image intensifiers.	12/31/2019	12/31/2018
	Hexavalent chromium in alkali dispensers used to create photocathodes, which may be used in spare parts for X-ray systems placed on the EU market before January 1, 2020.		
31	Lead, cadmium and hexavalent chromium in reused spare parts, recovered from medical devices placed on the market before July 22, 2014 and used in Category 8 equipment placed on the market before July 22, 2021, provided that reuse takes place in auditable closed-loop business-to-business return systems, and that the reuse of parts is notified to the consumer.	7/21/2021	7/21/2020
32	Lead in solders on printed circuit boards of detectors and data acquisition units for Positron Emission Tomographs which are integrated into Magnetic Resonance Imaging equipment.	12/31/2019	12/31/2018
33	Lead in solders on populated printed circuit boards used in Directive 93/42/EEC class IIa and IIb mobile medical devices other than portable emergency defibrillators.		
	Class IIa	6/30/2016	Prohibited
	Class IIb	12/31/2020	12/31/2019
34	Lead as an activator in the fluorescent powder of discharge lamps when used for extracorporeal photopheresis lamps containing BSP ($BaSi_2O_5$:Pb) phosphors.	7/21/2021	7/21/2020
35	Mercury in cold cathode fluorescent lamps for back-lighting liquid crystal displays, not exceeding 5 mg per lamp, used in industrial monitoring and control instruments placed on the market before July 22, 2017.	7/21/2024	7/21/2023
36	Lead used in other than C-press compliant pin connector systems for industrial monitoring and control instruments.	12/31/2020	12/31/2019

No.	Exclusion Item	Applicable Date	Our Date
37	Lead in platinized platinum electrodes used for conductivity measurements where at least one of the following conditions applies: (a) wide-range measurements with a conductivity range covering more than 1 order of magnitude (e.g. range between 0.1 mS/m and 5 mS/m) in laboratory applications for unknown concentrations; (b) measurements of solutions where an accuracy of +/– 1% of the sample range and where high corrosion resistance of the electrode are required for any of the following: (i) solutions with an acidity < pH 1; (ii) solutions with an alkalinity > pH 13; (iii) corrosive solutions containing halogen gas; (c) measurements of conductivities above 100 mS/m that must be performed with portable instruments.	12/31/2018	12/31/2017
38	Lead in solder in one interface of large area stacked die elements with more than 500 interconnects per interface which are used in X-ray detectors of computed tomography and X-ray systems.	12/31/2019	12/31/2018
	Lead in solder in one interface of large area stacked die elements with more than 500 interconnects per interface which may be used after that date in spare parts for CT and X-ray systems placed on the market before 1 January 2020.		
39	Lead in micro-channel plates (MCPs) used in equipment where at least one of the following properties is present: (a) a compact size of the detector for electrons or ions, where the space for the detector is limited to a maximum of 3 mm/MCP (detector thickness + space for installation of the MCP), a maximum of 6 mm in total, and an alternative design yielding more space for the detector is scientifically and technically impracticable; (b) a two-dimensional spatial resolution for detecting electrons or ions, where at least one of the following applies: (i) a response time shorter than 25 ns; (ii) a sample detection area larger than 149 mm^2; (iii) a multiplication factor larger than 1.3×10^3. (c) a response time shorter than 5 ns for detecting electrons or ions; (d) a sample detection area larger than 314 mm^2 for detecting electrons or ions; (e) a multiplication factor larger than 4.0×10^7.		
	Medical devices and monitoring and control instruments	7/21/2021	7/21/2020
	In-vitro diagnostic medical devices	7/21/2023	7/21/2022
	Industrial monitoring and control instruments	7/21/2024	7/21/2023
40	Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC for industrial monitoring and control instruments.	12/31/2020	12/31/2019
	Lead which may be used in spare parts for industrial monitoring and control instruments placed on the market before 1 January 2021.		

VIII. Application Exclusion Items Group C

No.	Description
PFOS or its salts	
1	Manufacture of etching agents (limited to those used in the manufacture of compound semiconductors that enable piezoelectric filters or wireless devices that transmit/receive electrical waves of a frequency of 3 megahertz or more.)
2	The manufacture of resist for semiconductor use
3	The manufacture of professional-use photographic film

IX. Details on 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
Tributyltinlaurate	3090-36-6
Bis(tributyltin)phthalate	4782-29-0
Coplymer 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,4,7,7atetrahydro-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-toly-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
γ-Hexabromocyclododecane	134237-52-8

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
Pentabromodidphenyl 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

Perfluoroctane Sulfonates (PFOS) Compounds	CAS No.
Perfluoroctane Sulfonates (PFOS) C8F17SO2X, 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
Annex C Group I	1,1,1-Trichloroethane (methylchloroform)	71-55-6
	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) 1,1-Dichloro-1-fluoroethane (HCFC-141b)	25167-88-8 1717-00-6
	Chlorodifluoroethane (HCFC-142) 1-Chloro-1,1-difluoroethane (HCFC-142b)	25497-29-4 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) 3,3-Dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca) 1,3-Dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb)	127564-92-5 422-56-0 507-55-1
	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

Ozone Depleting Substances (Substances Listed in the Annexes of the Montreal Protocol) (3)		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

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

Organostannic Compounds	CAS No.
Triphenyltin dimethyldithiocarbamate	1803-12-9
Triphenyltinfluoride; Stannane, fluorotriphenyl-	379-52-2
Triphenyltinacetate; Stannane, acetoxytriphenyl-	900-95-8
Triphenyltinchloride	639-58-7
Triphenyltinhydroxide	76-87-9
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
Tributyltinlaurate	3090-36-6
Bis(tributyltin)phthalate	4782-29-0
Tributyltinsulfamate	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 (PAHs)	CAS No.
Benzo[a]pyrene (BaP)	50-32-8
Benzo[e]pyrene (BeP)	192-97-2
Benzo[a]anthracene (BaA)	56-55-3
Chrysen (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) and individual salts and esters of PFOA	CAS No.
Perfluorooctanoic acid (PFOA)	335-67-1
Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
Sodium salt of Perfluorooctanoic acid	335-95-5
Potassium salt of Perfluorooctanoic acid	2395-00-8
Silver (1+) salt of Perfluorooctanoic acid	335-93-3
Perfluorooctanoyl fluoride	335-66-0
Methyl perfluorooctanoate	376-27-2
Ethyl perfluorooctanoate	3108-24-5

[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.

Dec. 2016: Added controlled substances for Appendix II, revised application exclusion items, and therefore, made changes to Attachment 1 “Non-Content Certificate”, and because of the added references for declarable substances, it was revised as Edition 5.0.1

[Changes from Guideline Edition 4.1]

No.	Main Content of Changes	Page
1	Contents: Changed item names	1
2	Added “Fuji Electric’s Policy for Controlled Substances” and “Declarable substances”	2
3	Added “Supplemental Information”	3
4	Added “Fuji Electric Policy for Application Exclusion Items”, Application Exclusion Items Group sorting, added Application Exclusion Items Group B, added EU-RoHS2 Supplement	4
5	Added CAS No., changed related major related laws and regulations and treaties, added guideline edition for target substances	5-12
6	Changed name of Prohibited Substance No.2 in Japanese	7
7	Changed thresholds for Conditionally Prohibited Substances No.1, 2, 3, 4, 5, 6, 9, 10, and 11	10-12
8	Added “Organic tin compound” to Conditionally Prohibited Substances	12
9	Set Fuji Electric’s expiration for items with expiration determined by RoHS in “Application Exclusion Items Group A” (6 months prior)	13-16
10	Added application exclusion items from EU-RoHS2 Annex 4 as “Application Exclusion Items Group B”	17
11	Added representative substances for Prohibited Substances and Conditionally Prohibited Substances	19-28
12	Changed [Attachment 1] Non-Content Certificate	30-33

[Edition 5.0.1]

No.	Main Content of Changes	Pages
1	Added Mandatory reporting substances	2, 15
2	Added prohibited substances and conditionally prohibited substances	5 - 14
3	Added reference for declarable substances (added chemSHERPA)	2, 3, 42
4	Revised application exclusions	16 - 26
5	Added substances to Attachment 1: Non-content Certificate	39 – 41

End of text

[Attachment 1] Non-Content Certificate

Appendix II Edition 5.0.1 Attachment 1 Ed.5.0.1

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, completed goods and equipment, subcontracted goods such as through commissioning production, processing and repairing to outside contractors including attachments, packages and other items shipped together with products, and substances suspected to remain in raw materials and parts used in manufacturing processes" do not contain the following prohibited substances.

* Details related to "Prohibited Substances", "Conditionally Prohibited Substances", and "Mandatory reporting substances" are according to Appendix II.

Materials that certify not to contain prohibited substances, conditionally prohibited substances, and mandatory reporting substances are described in Form 2 Answer List.

If prohibited substances, conditionally prohibited substances, and mandatory reporting 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

No.	Substance Name
1	Tributyl Tin Oxide (TBTO)
2	Certain Tributyl Tins and Triphenyl Tins
3	Polychrorinated Biphenyls (PCBs) and specified replacements
4	Polychrorinated Terphenyls (PCTs)
5	Polychloronaphthalenes (At least one chlorine atom)
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-dimethyanonaphthalene (alias: Endrin)
13	1,1,1-trichloro-2,2-bis (p arachlorophenyl) 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,4,7,7atetrahydro-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: Kelsen or Dikohol)
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 (HBCD)
37	Endosulfan
38	Pentachlorophenol

2. List of Conditionally Prohibited Substances

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) *Application exclusion is according to Appendix II	In homogeneous materials < 100ppm
2	Chromium VI compounds	(i) Packaging: Total amount of heavy metals (lead, mercury, cadmium, chromium VI)	Total < 100ppm
		(ii) All except (i) *Application exclusion is according to Appendix II	In homogeneous materials < 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) *Application exclusion is according to Appendix II	In homogeneous materials < 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) *Application exclusion is according to Appendix 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	Dioctyl-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 types) DEHP,BBP,DBP,DIBP	1) Usage in portions of electrical equipment that contact the skin for long periods: Immediate prohibition 2) Usage as constructional element of RoHS target products: Prohibit on relevant date	Intentionally added In homogeneous materials < 1000ppm
16	Benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene (BNST)	All (Excluding rubber other than tires)	Intentionally added
17	Polycyclic aromatic hydrocarbons (PAHs)	Usage in portions that contact human skin / inside of mouth for long periods	Intentionally added
18	Perfluorooctanoic acid (PFOA) and its salts	All	Intentionally added
19	Formaldehyde	Usage in wood products	Intentionally added
-	-	-	-	-

3. Substances that must be reported

No.	Substance Name	Reportable Applications	Threshold
1	Red phosphorus	When used, a coating must be applied	Intentionally added

* Private information in this document is only used for business relating to green procurement. Submit this if you agree.

List of Target Materials for the Non-Content Certificate

Materials marked with "○" in the Certificate column below means that prohibited substances are not contained.
When a mandatory reporting substance (red phosphorus) is contained, enter "○" in the exclusive box.
For materials that cannot be proven as "Not contained", report those substances in the "Contained Substance" column.

No.	Material Code (Item No.)	Part Kind	Part Model No.	Supplier	Contained (NO: ○ / YES: ×)	Contained Substance (When left is "×")	Contains Mandatory Reporting Substance Red Phosphorus (○)
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* 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

- Data created using JGPSSI survey response tools, OR
- JAMP AIS
- chemSHERPA

* Fuji Electric's business departments specify whether data created using the JGPSSI survey response tools or JAMP AIS should be used.

(2) For suppliers who deliver substances or mixtures to Fuji Electric

- Data created using JGPSSI survey response tools, OR
- JAMP AIS
- chemSHERPA

* Fuji Electric's business departments specify whether data created using the JGPSSI survey response tools or JAMP MSDSplus should be used.

[Source Links]

- JGPSSI survey response tools http://www.vt62474.jp/
- JAMP AIS/MSDSplus http://www.jamp-info.com/
- chemSHERPA https://chemsherpa.net/chemSHERPA/