No : RUB-45

Rubycon Group
Guide of environmentally hazardous substances

【Revised ： 20 January 2025】

RUBYCON CORPORATION

https://www.rubycon.co.jp/

1. Purpose

This guide covered environment-related substances contained in the parts and materials that make up the products (hereinafter referred to as "our products") manufactured and sold by Rubycon Group (hereinafter referred to as "Rubycon") or used in the manufacturing process.
The purpose is to clarify the substances which prohibited, and which is aimed total abolition, and to ensure that they are fully informed within our company and to our suppliers of parts and materials, in order to reduce the environmental impact of our products.

2. Scope

The scope of application is the parts, materials, and manufacturing processes which are consist of our products, and includes packaging materials and subsidiary materials for our products.
However, recycled materials which are used to packaging and subsidiary materials must meet the criteria for packaging materials in Table 1m.

3. Definitions

In this Guide, terms are the meaning as defined below:

(1) Prohibited substances

Among regulated chemical substances, which is prohibited to include in our procured products. In case of we specify the threshold, these chemical substances which include impurities must be less than our limits.
However, substances that are used as process chemicals*, and substance structure changes 100% disappears in the product are not applicable.
*Process chemicals: Not remain in the final product by the evaporation, reaction and so on.)

(2) Abolished Substances

Substances total abolition of which is to be promoted by Rubycon.
As for special applications for which no substitute technology is currently available, exceptions shall be provided on the conditions that such substances shall be used under control which based on agreement with Rubycon.

(3) Controlled substances

Substances of which is to be grasped by Rubycon.

(4) Packaging material, Subsidiary material

Packaging materials: Use for transportation and protection of our products which include materials and semi processed products.
Subsidiary material: Machine oil, Cleaning solution, etc. which use in the manufacturing process of Rubycon.

(5) Emission regulation

The substance which has concentration regulation in a closed space.

(6) Homogeneous material

A material that cannot be mechanically (including unscrewing, cutting, rushing, grinding and abrasive processes) disjointed into uniform composition.
The content concentration uses the mass of the homogeneous material as the denominator.
Basic concept of homogeneous materials (examples)

The below table is some examples of homogeneous materials.

	Part	Homogeneous material
Ex. 1	Lead wire terminal	“Aluminum tab”, ”Iron core wire”, ”Copper plating layer”, ”Tin plating layer”, etc.
Ex. 2	Laminated case	“Aluminum case”, “Resin”, etc.
Ex. 3	Plastic Sleeve	“Plastic tube (PET)”, “Ink”, etc.

4. Control Criteria for Prohibited and Abolished Substances and Controlled substances.
Table 1 shows prohibited substances, Table-2 shows abolished substances and Table 3 shows controlled substances.

5. Confirmation of analysis data
Amount of restricted 10 substances by the RoHS directive and Halogen should be confirmed that the threshold values are met by submitting precise analysis data once a year. However, Halogen is limited to materials that require a Halogen-free guarantee.

5.1 Analysis data
Please measure the quantities of the banned substances contained in accordance with the measurement method as mentioned in below table. Measurement should be made for each material or homogeneous substance.
The measurement data should include the information for the pre-treatment method, measuring method, name of the person who conducts the measurement, name of the person responsible for the measurement, description of the measuring instrument, date of measurement, measurement flow-chart, and photo of the sample.

Substance	Metal material	Polymer material (other than metal materials)
Lead / cadmium	IEC62321-5 ICP-OES, ICP-MS, AAS, AFS	
mercury	IEC62321-4 ICP-OES, ICP-MS, AAS, AFS	
Hexavalent chromium	IEC-62321-7-1 hot-water extraction method / Colorimetric method	IEC-62321-7-2 alkaline extraction / Colorimetric method
PBB, PBDE	Not covered	IEC-62321-6 GC-MS
DIBP, DBP, BBP, DEHP	Not covered	IEC-62321-8 GC-MS
Cl, Br	Not covered	BS-EN14582 IC

6. Submission of non-use certificate
Rubycon will ask our suppliers to submit a non-use guarantee to confirm the content when revising this guide restricted 10 substances by RoHS directive and except halogens, and then will confirm that the content is below the threshold.
When there is a change in the content of the composition table or SDS as amended by laws and regulations, please submit the latest version.

Table-1. Banned substances

No.	Substance Name *1)	CAS No.	Criteria/threshold levels	Criteria/Rubycon levels
1	Cadmium and its compounds	Group	No intentionally used. Inclusion in homogenous material in excess of 100ppm (0.01wt%) is (Except RoHS exemption)	5ppm in plastic materials 20ppm in solder 75ppm in metals
2	Lead and its compounds	Group	No intentionally used. Not contain more than 1000ppm(0.1wt%) in homogeneous (Except RoHS exemption)	100ppm in plastic materials 500ppm in solder 800ppm in component solder 800ppm in metals
3	mercury and its compounds	Group	No intentionally used. Not contain more than 1000ppm(0.1wt%) in homogeneous (Except RoHS exemption)	100ppm
4	Chromium[VI] compounds	Group	No intentionally used. Not contain more than 1000ppm(0.1wt%) in homogeneous (Except RoHS exemption)	100ppm
5	PBBs	Group	No intentionally used. Not contain more than 1000ppm(0.1wt%) in homogeneous (Except RoHS exemption)	100ppm
6	PBDEs	Group	No intentionally used. Not contain more than 1000ppm(0.1wt%) in homogeneous (Except RoHS exemption)	100ppm
7	Bis (2-ethylhexyl) phthalate (DEHP)	117-81-7	No intentionally used. Not contain more than 1000ppm(0.1wt%) in homogeneous material.	No intentionall migration pollution from packing, manufacturing equipment, etc..
8	Benzyl butyl phthalate (BBP)	85-68-7	No intentionally used.	No intentionall migration pollution from packing,
9	Dibutyl phthalate (DBP)	84-74-2	No intentionally used. Not contain more than 1000ppm(0.1wt%) in homogeneous material.	No intentionall migration pollution from packing, manufacturing equipment, etc..
10	Diisobutyl phthalate (DIBP)	84-69-5	No intentionally used. Not contain more than 1000ppm(0.1wt%) in homogeneous material.	No intentionall migration pollution from packing, manufacturing equipment, etc..
11	Diisononyl phthalate (DINP)	28553-12-0 68515-48-0	No intentionally used. Not contain more than 1000ppm(0.1wt%) in homogeneous material.	No intentionall migration pollution from packing, manufacturing equipment, etc..
12	Diisodecyl phthalate (DIDP)	26761-40-0 68515-49-1	Intentional use prohibited Not contain more than 1000ppm(0.1wt%) in homogeneous material.	No intentionall migration pollution from packing, manufacturing equipment, etc..
13	Di-n-octyl phthalate (DNOP)	117-84-0	Intentional use prohibited Not contain more than 1000ppm(0.1wt%) in homogeneous material.	No intentionall migration pollution from packing, manufacturing equipment, etc..
14	Asbestos	【Table-1a】	No intentionally used.	
15	Red phosphorus	7723-14-0	No intentionally used.	
16	Bis (chloromethyl) ether	542-88-1	No intentionally used.	
17	4-Aminodiphenyl and its salts	Group	No intentionally used.	
18	4-Nitrobiphenyl and its salts	Group	No intentionally used.	
19	Benzidine and its salts	Group	No intentionally used.	
20	β-Nahthylamine and its salts	Group	No intentionally used.	
21	Aldrin	309-00-2	No intentionally used.	
22	Endrin	72-20-8	No intentionally used.	
23	Chlordanes	Group	No intentionally used.	
24	Dieldrin	60-57-1	No intentionally used.	
25	Hexachlorobenzene	118-74-1	No intentionally used.	
26	Polychlorinated naphthalene (2 or more Chlorine atoms)	Group	No intentionally used.	
27	DDT	50-29-3	No intentionally used.	
28	Polychlorinated biphenyls (PCBs) and specific substitutes.	Group	No intentionally used.	

No.	Substance Name *1)	CAS No.	Criteria/threshold levels	Criteria/Rubycon levels
29	2,4,6-tri-tert-butylphenol	732-26-3	No intentionally used.	
30	N,N'-Ditolyl-1,4-phenylenediamine	27417-40-9	No intentionally used.	
31	N,N'-Bis(dimethylphenyl)-1,4-phenylenediamine	28726-30-9	No intentionally used.	
32	N-(Dimethylphenyl)-N'-tolyl-1,4-phenylenediamine	70290-05-0	No intentionally used.	
33	ODS	【Table-1b】	No intentionally used.	
34	1,2-dichloroethane(EDC)	107-06-2	No intentionally used.	
35	1,1-Dichloroethene	75-35-4	No intentionally used.	
36	1,2-Dichloroethylene cis-1,2-Dichloroethylene rans-1,2-Dichloroethylene	540-59-0 156-59-2 156-60-5	No intentionally used.	
37	1,3-Dichloropropene	542-75-6	No intentionally used.	
38	1,1,2-Trichloroethane	79-00-5	No intentionally used.	
39	Benzene	71-43-2	No intentionally used.	
40	Mirex	2385-85-5	No intentionally used.	
41	Beryllium and its compounds	Group	Not contain more than 1000ppm(0.1wt%) in homogeneous material.	
42	Arsenic and its inorganic compounds	Group	No intentionally used. [Exemption] Beryllium copper alloy of Spring material, alloy for electrical contact.	
43	Azo compounds	【Table-1c】	Inclusion as specified amine (table-1c) in excess of 30mg/kg (30ppm) is prohibited. Textile and leather articles which may come into direct and prolonged contact with the human skin.	
44	Dioxin	Group	No intentionally used.	
45	Chloromethylmethyle ether	107-30-2	No intentionally used.	
46	Benzotrichloride	98-07-7	No intentionally used.	
47	TBBP-A-bis	21850-44-2	No intentionally used.	
48	Sodium Azide	26628-22-8	No intentionally used.	
49	Polychlorinated terphenyls (PCTs)	61788-33-8	No intentionally used. inclusion in homogeneous material in excess of 50 ppm (0.005wt%) is prohibited.	
50	2,2,2-trichloro-1,1-bis(4-chlorophenyl)ethanol (Synonym: Kelthane or Dicofol)	115-32-2	No intentionally used.	
51	hexachlorobuta-1,3-diene	87-68-3	No intentionally used.	
52	Heptachlor	76-44-8	No intentionally used.	
53	Bistributyltinoxide (TBTO)	56-35-9	No intentionally used.	
54	Toxaphene	8001-35-2	No intentionally used.	
55	Radioactive Substances		No intentionally used.	
56	Short Chain Chlorinated Paraffins (SCCPS)（C:10-13)	Group	No intentionally used.	
57	2-(2H-1,2,3-Benzotriazol-2-yl)-4,6-di-tert-butylphenol（UV-320）	3846-71-7	No intentionally used.	
58	Perfluoro(octane-1-sulfonic acid) or its salts	Group	No intentionally used.	
59	Cobalt dichloride	7646-79-9	No intentionally used.	
60	Dimethylfumarate (DMF)	624-49-7	Inclusion in a material in excess of 0.1ppm is prohibited.	
61	Hexabromocyclododecane (HBCDD)	【Table-1d】	No intentionally used. Inclusion in product (parts) in excess of 100ppm (0.01wt%) is prohibited.	
62	PFOSF	307-35-7	No intentionally used.	
63	Pentachlorobenzene	608-93-5	No intentionally used.	
64	alpha -Hexachlorocyclohexane	319-84-6	No intentionally used.	
65	beta -Hexachlorocyclohexane	319-85-7	No intentionally used.	

No.	Substance Name *1)	CAS No.	Criteria/threshold levels	Criteria/Rubycon levels
66	gamma -Hexachlorocyclohexane	58-89-9	No intentionally used.	
67	Chlordecone	143-50-0	No intentionally used.	
68	Tri-substituted organostannic compounds (including TBT, TPT)	Group	Inclusion as a tin in materials in excess of 0.1wt% (1000ppm) is prohibited.	
69	Formaldehyde(monomer)	50-00-0	Apply only to emission from products. The concentration the substance in the air is 0.1ppm or less in air tight room)	
70	Tris(2-chloroethyl) phosphate (TCEP)	115-96-8	Inclusion in product (parts) in excess of 1000ppm (0.1wt%) is prohibited.	
71	Tris(2-chloro-1methyl) phosphate (TCPP)	13674-84-5	Inclusion in product (parts) in excess of 1000ppm (0.1wt%) is prohibited.	
72	Tris(1,3-dichioro-2-propyl) phosphate (TDCPP)	13674-87-8	Inclusion in product (parts) in excess of 1000ppm (0.1wt%) is prohibited.	
73	Endosulfan (Technical endosulfan and its related isomers)	115-29-7 959-98-8 33213-65-9	No intentionally used.	
74	Polycyclic aromatic hydrocarbons (PAHs)	【 Table-1e 】	No intentionally used. Rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity are satisfied less than 1ppm contain.	
75	Dibutyltin (DBT) compounds	Group	Inclusion as a tin in homogeneous materials in excess of 1000ppm is Excluded：Rubber additive (except:tire)	
76	Pentachlorophenol(PCP) and individual salts and esters of PCP	Group	No intentionally used.	
77	Perfluorooctanoic acid and its salts (PFOA)- related substances	【Table-1f 】	No intentionally used.	
78	Decabromodiphenyl ether (DecaBDE)	1163-19-5	No intentionally used.	
79	Pentachlorothiophenol（PCTP）	133-49-3	No intentionally used.	
80	Phenol, Isopropylated Phosphate （PIP(3:1)）	68937-41-7	No intentionally used.	
81	Perfluorohexane Sulfonates (PFHxS) and its salts and PFHxS-related substances	—	No intentionally used.	
82	dicofol	10606-46-9	No intentionally used.	
83	1-bromopropane	106-94-5	No intentionally used.	
84	1,4-dioxane	123-91-1	No intentionally used.	
85	N-Methylpyrrolidone (NMP)	872-50-4	No intentionally used.	
86	Pigment Violet 29	81-33-4	No intentionally used.	
87	Long-Chain Perfluoroalkyl Carboxylate and Perfluoroalkyl Sulfonate Chemical Substances (LCPFACs)	【Table-1g 】	No intentionally used.	
88	Tetrachloroethylene	127-18-4	No intentionally used.	
89	Trichloroethylene	79-01-6	No intentionally used.	
90	Dichloromethane	75-09-2	No intentionally used. (Toy applications)	

No.	Substance Name *1)	CAS No.	Criteria/threshold levels	Criteria/Rubycon levels
91	Natural rubber	-	No intentionally used.	
92	Fluorinated greenhouse gases (HFC,PFC,SF6)	-	No intentionally used.	
93	Beryllium oxide (BeO)	1304-56-9	above 0.1% beryllium oxide by weight per surveying unit.	
94	Perfluorocarboxylic acids (PFCAs) C9-C14 and its salts - related substances	—	0.0000025 wt% (25 ppb) of PFCAs including its salts in article or mixture 0.000026 wt% (260 ppb) of one or a combination of PFCAs-related substances, in article or mixture	
95	DechloranePlus	13560-89-9 135821-03-3 135821-74-8	No intentionally used.	
96	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	No intentionally used.	
97	methanol	67-56-1	No intentionally used.	
98	Hexane	110-54-3	No intentionally used.	
99	Toluene	108-88-3	No intentionally used.	
100	White phosphorus	12185-10-3	No intentionally used.	
101	Methoxychlor	72-43-5	No intentionally used.	
102	Chloroethylene; Vinyl chloride	75-01-4	No intentionally used. Does not apply to monomer residue in polyvinylchloride (PVC).	
103	Benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene (BNST)	68921-45-9	No intentionally used.	

1 The substances in this specification are illustrative only, not all the substances and its alias name are listed.
In the case of any variance between Japanese and English text, the Japanese shall prevail.

Table-1a Asbestos

Substances Name *1	CAS No.
Asbestos	1332-21-4
Chrysotile	12001-29-5
Crocidolite	12001-28-4
Amosite	12172-73-5
Anthophyllite	77536-67-5
Tremolite	77536-68-6
Actinolite	77536-66-4
Chrysotile asbestons	132207-32-0

Table-1b Ozone Depleting Substances (ODS)

Substances Name *1	CAS No.	Montreal Protocol
CFCS	several	annex A group I
		annex B group I
Halons	several	annex A group Ⅱ
Tetrachloromethane; Carbon tetrachloride	56-23-5	annex B group Ⅱ
1,1,1-Trichloroethane	71-55-6	annex B group Ⅲ
HCFCs	several	annex C group I
HBFCs	several	annex C group Ⅱ
Bromo(chloro)methane	74-97-5	annex C group Ⅲ
Bromomethane; Methyl bromide	74-83-9	annex E group I
HFCs	Several	annex F group I
HFC-23	75-46-7	annex F group Ⅱ

Table-1c Amines to be never generated upon decomposition of azo compounds

Substances Name *1	CAS No.
o-anisidine	90-04-0
2-naphthylamine	91-59-8
3,3'-dichlorobenzidine	91-94-1
4-aminobiphenyl	92-67-1
benzidine	92-87-5
o-toluidine	95-53-4
4-chloro-2-methylaniline	95-69-2
2,4-toluenediamine	95-80-7
o-aminoazotoluene	97-56-3
5-nitro-o-toluidine	99-55-8
3,3'-dichloro-4,4'-diaminodiphenylmethane	101-14-4
4,4'-methylenedianiline	101-77-9
4,4'-diaminodiphenylether	101-80-4
p-chloroaniline	106-47-8
o-dianisidine and its salts	119-90-4
3,3'-dimethylbenzidine	119-93-7
2-methoxy-5-methylaniline	120-71-8
2,4,5-trimethylaniline	137-17-7
4,4'-diaminodiphenylsulfide	139-65-1
2,4-diaminoanisole	615-05-4
4,4'-diamino-3,3'-dimetyldiphenylmethane	838-88-0
4-aminoazobenzene	60-09-3

Table-1d Hexabromocyclododecane [HBCDD]

Substances Name *1	CAS No.
Hexabromocyclododecane	25637-99-4
rel-(1R,2S,5R,6S,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane	4736-49-6
rel-(1R,2S,5R,6S,9S,10R)-1,2,5,6,9,10-Hexabromocyclododecane	65701-47-5
(1R,2R,5R,6S,9S,10S)-1,2,5,6,9,10-Hexabromocyclododecane	138257-17-7
(1R,2R,5R,6S,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane	138257-18-8
(1R,2S,5S,6R,9S,10S)-1,2,5,6,9,10-Hexabromocyclododecane	138257-19-9
(1R,2S,5S,6S,9S,10R)-1,2,5,6,9,10-Hexabromocyclododecane	169102-57-2
(1R,2R,5S,6R,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane	678970-15-5
(1R,2S,5R,6S,9S,10S)-1,2,5,6,9,10-Hexabromocyclododecane	678970-16-6
(1R,2R,5R,6S,9S,10R)-1,2,5,6,9,10-Hexabromocyclododecane	678970-17-7
1,2,5,6,9,10-Hexabromocyclododecane	3194-55-6
rel-(1R,2R,5S,6R,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane	134237-50-6
rel-(1R,2S,5R,6R,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane	134237-51-7
rel-(1R,2R,5R,6S,9S,10R)-1,2,5,6,9,10-Hexabromocyclododecane	134237-52-8

Table-1e Polycyclic aromatic hydrocarbons [PAHs]

Substances Name *1	CAS No.
Benzo[a]pyrene	50-32-8
Benzo[e]pyrene	192-97-2
Benzo[a]anthracene	56-55-3
Chrysene	218-01-9
Benzo[b]fluoranthene	205-99-2
Benzo[j]fluoranthene	205-82-3
Benzo[k]fluoranthene	207-08-9
Dibenzo(A,H)anthracene	53-70-3

Table-1f Perfluorooctanoic acid (PFOA) and individual salts and esters of PFOA

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https://www.nite.go.jp/chem/jcheck/list5.action?request_locale=en&category=211&tno=35

Table-1g Long-chain perfluoroalkyl carboxylate (LCPFACs) and perfluoroalkyl

Substances Name *1	CAS No.
Perfluorooctyl iodide (Octane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-8-iodo-)	507-63-1
Tetrahydroperfluoro-1-decanol (1-Decanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-.)	678-39-7
Perfluoro-1-dodecanol (1-Dodecanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-.heneicosafluoro-)	865-86-1
Perfluorodecyl iodide (Decane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-10-iodo-.)	2043-53-0
1,1,2,2-Tetrahydroperfluorododecyl iodide (Dodecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10-heneicosafluoro-12-iodo-.)	2043-54-1
Perfluorodecylethyl acrylate (2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11, 12,12,12-heneicosafluorododecyl ester.)	17741-60-5
1,1,2,2-Tetrahydroperfluorodecyl acrylate (2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecylester)	27905-45-9
1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12-Pentacosafluoro-14-iodotetradecane (Tetradecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12-pentacosafluoro-14-iodo-.)	30046-31-2
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-Pentacosafluorotetradecan-1-ol (1-Tetradecanol,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-pentacosafluoro-.)	39239-77-5
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,16--Nonacosafluorohexadecan-1-ol (1-Hexadecanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,16-	60699-51-6
1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14-Nonacosafluoro-16-iodohexadecane (Hexadecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14-nonacosafluoro-16-iodo-.)	65510-55-6
Sodium;2-methylpropane-1-sulfonate (1-Propanesulfonic acid, 2-methyl-, 2-[[1-oxo-3-[(.gamma.-.omega.-perfluoro-C4-16-alkyl)thio]propyl]amino] derivs., sodium salts)	68187-47-3
1,1,2,2-Tetrahydroperfluoroalkyl (C8-C14) alcohol Alcohols, C8-14, .gamma.-.omega.-perfluoro.)	68391-08-2
Thiols, C8-20, gamma-omega-perfluoro, telomers with acrylamide Thiols, C8-20, .gamma.-.omega.-perfluoro, telomers with acrylamide.)	70969-47-0
Silicic acid (H4SiO4), sodium salt (1:2), reaction products with chlorotrimethylsilane and 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-1-decano (Silicic acid (H4SiO4), sodium salt (1:2), reaction products with chlorotrimethylsilane and 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-1-decanol.)	125476-71-3
Thiols, C4-20, gamma-omega-perfluoro, telomers with acrylamide and acrylic acid, sodium salts (Thiols, C4-20, .gamma.-.omega.-perfluoro, telomers with acrylamide and acrylic acid, sodium salts.)	1078712-88-5
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(2-((gamma-omega-perfluoro-C4-20-alkyl)thio)acetyl) derivs., inner salts (1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-[2-[(.gamma.-.omega.-perfluoro-C4-20-a lkyl)thio]acetyl] derivs., inner salts.)	1078715-61-3
Polyfluoroalkyl betaine (generic) (Polyfluoroalkyl betaine (PROVISIONAL).)	-
Long-Chain Perfluoroalkyl Carboxylate and Perfluoroalkyl Sulfonate Chemical Substances (LCPFACs)	-
Perfluorinated polyamine (generic) (Perfluorinated polyamine (PROVISIONAL).)	-

*1 The substances in this specification are illustrative only, not all the substances and its alias name are listed.
In the case of any variance between Japanese and English text, the Japanese shall prevail.

Table-2. Abolished Substances

No.	Substance name *1)	CAS No.	Remarks	Date to prohibit the delivery to Rubycon
1	poly vinyl chloride (PVC)	9002-86-2	Intentional use prohibited.	Prohibition
			Exemptions: : In case where: materials are specified by law or regulation; materials arespecified by the customer, etc.	N/A (Report use/content)
2	Dioctyltin (DOT) compounds	Group	Inclusion as a tin in homogeneous materials in excess of 1000ppm is prohibited.. Regulated items : Textile, leather products or their	Prohibition
			Other than the regulated items	Report use/content
3	Decabromodiphenylethane (DBDPE)	84852-53-9	Intentional use in all applications	Report use/content
4	PFAS （except describe substances Rubycon of Table-1 ）	・CompTox Chemicals Dashboard - US EPA https://comptox.epa.gov/dashboard/chemical-lists/pfasmaster	Intentional use in all applications	Report use/content
5	Chlorinated paraffins with carbon chain lengths in the range C14-17 and chlorination levels at or exceeding 45 per cent chlorine by weight	Group	No intentionally used. Exclusions: Use for metalworking oils, repair parts, etc. (including machining processes)	Report use/content
6	Chlorpyrifos	2921-88-2	No intentionally used.	Report use/content
7	Long-chain perfluorocarboxylic acids (PFCAs) C14-C21,their salts and related compounds	Group	No intentionally used.	Report use/content

*1 The substances in this specification are illustrative only, not all the substances and its alias name are listed.

Table-3. Controlled Substances

1.REACH Regulation SVHC (substances of very high concern)

Name of Substances	URL
Authorization Candidate List substances (SVHC) of REACH regulation	Candidate List of substances of very high concern for Authorisation - ECHA (europa.eu)

2.Banned substances: limited to the Procurement items which require low-halogen guarantee

Substances Name	Threshold limit
Br	Br<900ppm
Cl	Cl<900ppm
Br+Cl	Br+Cl<1500ppm

3.Judgment standard for packaging materials

Substances Name	Threshold limit
Cadmium、Lead、Total Chromium（(including chromium[VI])）、mercury	The total allowable concentration of four heavy metals shall be less than 100ppm. Less than 5ppm is determined as an allowable cadmium concentration in a plastic (including rubber) part.

4.Mineral oil: Target use: mineral oil in ink for packaging and printed paper

Substance	Scope	Requirement
MOAH consisting of 1 to 7 aromatic rings	Inks	0.1% or less
		0.1% or less and 1ppm or less MOAH compounds containing 3 to 7 aromatic rings
MOSH consisting of 16 to 35 carbon atoms		0.1% or less

*1 The substances in this specification are illustrative only, not all the substances and its alias name are listed.
In the case of any variance between Japanese and English text, the Japanese shall prevail.

Applicable laws and regulations	Referanc URL
Chemical Substances Control Law (CSCL), Class I specified chemical substances	https://www.meti.go.jp/policy/chemical_management/kasinhou/about/substance_list.html
Industrial Safety and Health Act.	https://hourei.net/law/347AC0000000057
Act on the Protection of the Ozone Layer	Vienna Convention for the Protection of the Ozone Layer Montreal Protocol on Substances that Deplete the Ozone Layer）
Toxic Substances Control Act：TSCA	https://www.epa.gov/tsca-inventory
RoHS2 Directive	http://ec.europa.eu/environment/waste/rohs_eee/index_en.htm
RoHS2 Directive Exemptions (ANNEX Ⅲ)	https://environment.ec.europa.eu/topics/waste-and-recycling/rohs-directive_en
ELV Directive	http://ec.europa.eu/environment/waste/elv/index.htm
REACH restricted substances (ANNEX 17)	https://echa.europa.eu/substances-restricted-under-reach
Substances approved under REACH Regulation (ANNEX 14)	https://echa.europa.eu/authorisation-list
EU-POPs Annex 1 Part A	https://echa.europa.eu/list-of-substances-subject-to-pops-regulation
Global Automotive Declarable Substance List（GADSL）	http://www.gadsl.org
IEC 62474 DB Declarable substance groups and declarable substances	http://std.iec.ch/iec62474
'French Order on Mineral Oils in Printing Inks	https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000045733481

Revision history

Revision	Date	Content of Revision
RUB-43	20-Jan-23	・Fully revised the format ・Deleted Restricted Substances and Managed Substances ・ Added Substance name. (written in red letter) ・ Deleted Substances Chloroethylene; Vinyl chloride（75-01-4） enzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene (BNST) (68921-45-9） ・ Changed to Banned substances from Abolished Substances No.88 Tetrachloroethylene(127-18-4) No.89 Trichloroethylene(79-01-6) Phthalates No.11 Diisononyl phthalate (DINP) （28553-12-0）（68515-48-0） No.12 Diisodecyl phthalate (DIDP) （26761-40-0）（68515-49-1） No.13 Di-n-octyl phthalate (DNOP)（117-84-0） No.91 Natural Rubber ・ Changed to Banned substances from Restricted Substances No.97 Methyl alcohol; (methanol) (67-56-1) ・ Deleted Managed Substances.
RUB-44	19-Jan-24	・Added controlled substances to term definitions ・Process chemicals added to prohibited substances ・Added Halogen analysis data of Halogen Free materials ・Describe the analysis method in detail. ・Submitted of non-use certificate Describe the other 10 substances prohibited by RoHS directive Confirmation method. ・Added substances No.100 White phosphorus （12185-10-3) No.101 Methoxychlor (72-43-5) No.102 Chloroethylene; Vinyl chloride (75-01-4) No.103 Benzenamine, N-phenyl-, reaction products with styrene and trimethylpentene (BNST) (68921-45-9) ・Deleted substances RUB-43 No.78 2,4,6-tri-tert-butylphenol (TTBP) (732-26-3) Duplicate with No.28 RUB-43 No.80 hexachlorobuta-1,3-diene (HCBD) (87-68-3) Duplicate with No.29 ・Added controlled substances REACH Regulation SVHC (substances of very high concern) to controlled substance from Banned substances of No.99 Halogen to controlled substance from Banned substances of No.100 Packing to controlled substance from Banned substances of No.101 ・Added Mineral Oil

Revision	Date	Content of Revision
RUB-45	20-Jan-25	・Changed Packaging material, Subsidiary material Deleted Office supplies ・Changed Analysis data. Metal material PBB, PBDE IEC-62321-6,GC-MS to Not Coverd. ・Added Table-2 Abolished Substances No.5 Chlorinated paraffins with carbon chain lengths in the range C14-17 and chlorination levels at or exceeding 45 per cent chlorine by weight No.6 Chlorpyrifos (2921-88-2) No.7 Long-chain perfluorocarboxylic acids (PFCAs) C14-C21, their salts and related compounds ・Changed Table-1f Added Substance name ・Table-3 Controlled Substances Changed in use of mineral oil. Changed from ink to ink for packaging and printed paper MOAH consisting of 1 to 7 aromatic rings Changed Requirement from 1% or less to 0.1% or less ・Added Applicable laws and regulations French Order on Mineral Oils in Printing Inks