

Green Procurement – Environmentally hazardous Substance List(Ver. 6.1)

- The following shows environmentally hazardous substances which are specified in the NJRC "Green Procurement Guideline 13th Edition".
- The content in this list will become effective on 1st, August 2019.
- This complies with those that are specified by IEC 62474 and NJRC .
Refer to IEC 62474 for the example of substances
→ <http://std.iec.ch/iec62474>
- Although the substance, the application or the acceptable level is not specified in this list, we should internal or external laws and regulations when restricted.

< Example of laws and regulations, but not limited to the following >

- Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc (Kashinoh)
- The first class and the second class specific chemical substances
- Industrial Safety and Health Act – Substances banned on production
- Poisonous Material Control Law – Specific poisonous substances
- Montreal Protocol on Substances that Deplete the Ozone Layer – Substances specified in Appendix A, B, C and E

(1) Prohibited Substances

No.		Name of substance(s)	Application(s)	Allowable concentration * = in homogeneous material ** = in product	Exception of application
1	R	Cadmium / Cadmium compounds	All, except batteries	100ppm *	See appendix Table-1
			Batteries	5 ppm **	—
			Packaging materials	100ppm * ※1	—
2	R	Chromium VI compounds	All	1000ppm *	See appendix Table-1
			Packaging materials	100ppm * ※1	—
3	R	Lead / Lead compounds	All, except as noted below	1000ppm *	See appendix Table-1
			Consumer products designed or intended primarily for children 12 years of age or younger	100ppm **	—
			Paint and similar surface coatings of toys and other articles intended for use by children	90ppm *	—
			Cables/cords with thermoset or thermoplastic coatings	300ppm * Surface coating	—
			Batteries	40 ppm **	—
			Packaging	100ppm * ※1	—
4	R	Lead chromate	All	1000ppm **	—
5	R	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	All	1000ppm **	—
6	R	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	All	1000ppm **	—
7	R	Mercury / Mercury compounds	All, except batteries	Intentionally added or 1000ppm *	See appendix Table-1
			Batteries	1 ppm **	—
			Packaging	100ppm * ※1	—
8	R	Tributyl tin oxide (TBTO)	All	Intentionally added or 1000ppm **	—
9	R	Tri-substituted organostannic compounds	All	Intentionally added or 1000ppm * tin in a material	—
10	R	Polybrominated biphenyls (PBBs)	All	1000ppm *	—
11	R	Polybrominated diphenylethers (PBDEs)	All	Intentionally added or 1000ppm *	—
12	R	Polychlorinated biphenyls (PCBs) and specific substitutes	All	Intentionally added	—
13	R	Polychlorinated terphenyls (PCTs)	All	50ppm *	—
14	R	Polychlorinated naphthalenes (more than 1 chlorine atoms)	All	Intentionally added	—
15	R	Shortchain chlorinated paraffins (C10-C13)	All	1000ppm **	—
16	R	Asbestos	All	Intentionally added	—
17	R	Azocolourants and azodyes which form certain aromatic amines (limited to surface that directly contact with skins for a long time)	Textiles and leather	30ppm **	—
18	R	Ozone depleting substances	All	Intentionally added	—
19	R	Perfluorooctane sulfonate (PFOS)	All	Intentionally added or 1000ppm *	See appendix Table-1
20	R	Fluorinated greenhouse gases (PFC, SF6, HFC)	All	Intentionally added	—
21	R	Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)	All	Intentionally added	—
22	R	Dimethyl fumarate	All	0.1ppm *	—
23	R	Dibutyltin (DBT) compounds	All	1000ppm * tin in a material	—

24	IEC 62474	R	Diocetyl tin (DOT) compounds	(a) textile and leather articles intended to come into contact with the skin, (b) childcare articles (c) two-component room temperature vulcanisation moulding kits (RTV-2 moulding kits)	1000ppm * tin in a material	—
25		R	Hexabromocyclododecane (HBCDD) and all major diastereoisomers	All	Intentionally added	—
26		R	Bis(2-ethylhexyl) phthalate (DEHP)	All	Intentionally added or 1000ppm *	—
27		R	Dibutyl phthalate (DBP)	All	Intentionally added or 1000ppm *	—
28		R	Butyl benzyl phthalate (BBP)	All	Intentionally added or 1000ppm *	—
29		R	Diisobutyl phthalate (DIBP)	All	Intentionally added or 1000ppm *	—
1	NJRC		Red phosphorus (CAS No. 7723-14-0)	Resins	Intentionally added	—

※1 Packaging components and materials that the total allowable concentration of Cd, Cr+, Pb and Hg should be 100ppm or less.

※2 - Delete -

(2) Controlled Substances

No.		Name of substance(s)	Application(s)	Allowable concentration * = in homogeneous material ** = in product	Exception of application	
1	IEC 62474	R	Nickel	All, where prolonged skin contact is expected	Intentionally added	—
2		-	Polyvinyl chloride (PVC) and PVC co-polymer	All	1000ppm **	—
3		I	Brominated flame retardants (other than PBBs, PBDEs, or HBCDD)	Plastic parts other than in printed wiring board assemblies Printed wiring board laminate	1000ppm * plastic material total bromine content by weight in the laminate 900 ppm *	— —
4		I	Chlorinated Flame Retardants (CFR)	Plastic parts other than in printed wiring board assemblies Printed wiring board laminate	1000ppm * plastic material total chlorine content by weight in the laminate 900 ppm *	— —
5		R	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	All	1000ppm **	—
6		R	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	All	1000ppm **	—
7		R	Selected Phthalates Group 2 (DIDP, DINP, DNOP)	Children's toy or child care article that can be placed in a child's mouth	1000ppm * plasticized material	—
8		R	Radioactive substances	All	Intentionally added	—
9		R	Formaldehyde	Composite wood (plywood, particle board, medium density fiberboard) products or components Textiles	Intentionally added 75ppm **	— —
10		R	Diarsenic pentoxide	All	1000ppm **	—
11		R	Diarsenic trioxide	All	1000ppm **	—
12		R	Perchlorates	All	0.006ppm **	—
13		R	Tris (2-chloroethyl) phosphate (TCEP)	All	1000ppm **	—
14		I	Beryllium oxide (BeO)	All	1000ppm **	—
15		R	Refractory Ceramic Fibres, Aluminosilicate	All	1000ppm **	—
16		R	Refractory Ceramic Fibres, Zirconia Aluminosilicate	All	1000ppm **	—
17		R	Cobalt dichloride (CoCl2)	All	1000ppm **	—
18		R	Boric acid	All	1000ppm **	—
19		R	Disodium tetraborate, anhydrous	All	1000ppm **	—
20		R	Tetraboron disodium heptaoxide, hydrate	All	1000ppm **	—
21		R	4-[4,4'-bis(dimethylamino) benzhydrylidene] cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Violet 3)	All	1000ppm **	—
22		-	REACH Regulation - Substance of Very High Concern (SVHC) ※ Except as specified in this list	All	1000ppm **	—

The version of the survey tool corresponding with this list is as follows:

<input type="checkbox"/> chemSHERPA Info. on Articles Ver.1.07.00 or later Info. on Chemicals Ver.1.07.00 or later <input type="checkbox"/> Certificate of Nonuse of Hazardous Substances Form: Ver. 6.1
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Appendix Table – 1 Exempted Applications

Substances	Application or concentration to be exempted	
Mercury	<p>1. Mercury in single capped (compact) fluorescent lamps not exceeding (per burner)</p> <p>(a) For general lighting purposes < 30W 2.5mg</p> <p>(b) For general lighting purposes > 30W and < 50W 3.5mg</p> <p>(c) For general lighting purposes > 50W and < 150W 5mg</p> <p>(d) For general lighting purposes > 150W 15mg</p> <p>(e) For general lighting purposes with circular or square structural shape and tube diameter < 17mm 7mg</p> <p>(f) For special purposes 5mg</p> <p>(g) –Delete–</p> <p>2a. Mercury in double-capped linear fluorescent lamps for general lighting purposes not exceeding (per lamp)</p> <p>(1) Tri-band phosphor with normal lifetime and a tube diameter < 9mm (e.g. T2) 4mg</p> <p>(2) Tri-band phosphor with normal lifetime and a tube diameter > 9mm and < 17mm (e.g. T5) 3mg</p> <p>(3) Tri-band phosphor with normal lifetime and a tube diameter > 17mm and < 28mm (e.g. T8) 3.5mg</p> <p>(4) Tri-band phosphor with normal lifetime and a tube diameter > 28mm (e.g. T12) 3.5mg</p> <p>(5) Tri-band phosphor with long lifetime (> 25,000h) 5mg</p> <p>2b. Mercury in other fluorescent lamps not exceeding (per lamp)</p> <p>(1) –Delete–</p> <p>(2) –Delete–</p> <p>(3) Non-linear tri-band phosphor lamps with tube diameter > 17mm (e.g.T9) 15mg</p> <p>(4) Lamps for other general lighting and special purposes (e.g. induction lamps) 15mg</p> <p>3. Mercury in Cold Cathode Fluorescent Lamps and External Electrode Fluorescent Lamps (CCFL and EEFL) for special purposes not exceeding (per lamp)</p> <p>(a) Short length (< 500mm) 3.5mg</p> <p>(b) Medium length (> 500mm and < 1500mm) 5mg</p> <p>(c) Long length (> 1500mm) 13mg</p> <p>4a. Mercury in other low pressure discharge lamps (per lamp) 15mg</p> <p>4b. Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner) in lamps with improved colour rendering index Ra > 60</p> <p>(I) P < 155W 30mg</p> <p>(II) 155W < P < 405W 40mg</p> <p>(III) P > 405W 40mg</p> <p>4c. Mercury in other High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner)</p> <p>(I) P < 155W 25mg</p> <p>(II) 155W < P < 405W 30mg</p> <p>(III) P > 405W 40mg</p> <p>4d. –Delete–</p> <p>4e. Mercury in Metal Halide lamps (MH)</p> <p>4f. Mercury in other discharge lamps for special purposes not specifically mentioned in this Annex</p> <p>4g. –Delete–</p> <p>36. –Delete–</p>	
	Lead	<p>5a. –Delete–</p> <p>5b. Lead in glass of fluorescent tubes not exceeding 0.2% by weight</p> <p>6a-I. Lead as an alloying element in steel for machining purposes containing up to 0.35 % lead by weight and in batch hot dip galvanised steel components up to 0.2 % lead by weight</p> <p>6b. –Delete–</p> <p>6b(I). Lead as an alloying element in aluminium containing up to 0,4 % lead by weight, provided it stems from lead-bearing aluminium scrap recycling</p> <p>6b(II). Lead as an alloying element in aluminium for machining purposes with a lead content up to 0,4 % by weight</p> <p>6c. Copper alloy containing up to 4% lead by weight</p> <p>7a. Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead)</p> <p>7b. –Delete–</p> <p>7c. (I) 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</p> <p>7c. (II) Lead in dielectric ceramic in capacitors for a rated voltage of 125V AC or 250V DC or higher</p> <p>7c. (III) –Delete–</p> <p>7c. (IV) Lead in PZT based dielectric ceramic materials for capacitors being part of integrated circuits or discrete semiconductors</p> <p>9b. Lead in bearing shells and bushes for refrigerant-containing compressors for Heating, Ventilation, Air Conditioning and Refrigeration (HVACR) applications</p> <p>Applies to categories 8, 9 and 11; expires on:</p> <p>–21 July 2023 for category 8 in vitro diagnostic medical devices</p> <p>–21 July 2024 for category 9 industrial monitoring and control instruments and for category 11</p> <p>–21 July 2021 for other subcategories of categories 8 and 9</p> <p>9b(I). –Delete–</p> <p>11a. –Delete–</p> <p>11b. –Delete–</p> <p>12. –Delete–</p> <p>13a. Lead in white glasses used for optical applications</p> <p>Applies to all categories; expires on:</p> <p>–21 July 2023 for category 8 in vitro diagnostic medical devices</p> <p>–21 July 2024 for category 9 industrial monitoring and control instruments and for category 11</p> <p>–21 July 2021 for all other categories and subcategories</p> <p>13b. Lead in filter glasses and glasses used for reflectance standards</p> <p>Applies to categories 8, 9 and 11; expires on:</p> <p>–21 July 2023 for category 8 in vitro diagnostic medical devices</p> <p>–21 July 2024 for category 9 industrial monitoring and control instruments and for category 11</p> <p>–21 July 2021 for other subcategories of categories 8 and 9</p> <p>13b(I). Lead in filter glasses and glasses used for reflectance standards</p> <p>Applies to categories 1 to 7 and 10; expires on: expires on 21 July 2021 for categories 1 to 7 and 10</p> <p>13b(III). Lead in glazes used for reflectance standards</p> <p>Applies to categories 1 to 7 and 10; expires on: expires on 21 July 2021 for categories 1 to 7 and 10</p> <p>14. –Delete–</p> <p>15. Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages</p> <p>16. –Delete–</p> <p>17. –Delete–</p> <p>18a. –Delete–</p>

Appendix Table – 1 Exempted Applications

Substances	Application or concentration to be exempted
Lead	<p>18b. 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 (BaSi2O5:Pb)</p> <p>19. —Delete—</p> <p>20. —Delete—</p> <p>21. Lead in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses</p> <p>22. —Delete—</p> <p>23. —Delete—</p> <p>24. Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors</p> <p>25. Lead oxide in Surface conduction Electron emitter Displays (SED) used in structural elements, notably in the seal frit and frit ring</p> <p>26. —Delete—</p> <p>27. —Delete—</p> <p>29. Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC</p> <p>31. —Delete—</p> <p>32. Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes</p> <p>33. —Delete—</p> <p>34. Lead in cermet-based trimmer potentiometer elements</p> <p>37. Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body</p> <p>41. —Delete—</p> <p>42. Lead in bearings and bushes of diesel or gaseous fuel powered internal combustion engines applied in non-road professional use equipment:</p> <ul style="list-style-type: none"> - with engine total displacement ≥ 15 litres; or - with engine total displacement < 15 litres and the engine is designed to operate in applications where the time between signal to start and full load is required to be less than 10 seconds; or regular maintenance is typically performed in a harsh and dirty outdoor environment, such as mining, construction, and agriculture applications.
Cadmium	<p>8a. —Delete—</p> <p>8b. Cadmium and its compounds in electrical contacts</p> <p>Applies to categories 8, 9 and 11; expires on:</p> <ul style="list-style-type: none"> -21 July 2023 for category 8 in vitro diagnostic medical devices -21 July 2024 for category 9 industrial monitoring and control instruments and for category 11 -21 July 2021 for other subcategories of categories 8 and 9 <p>8b(I). Cadmium and its compounds in electrical contacts used in:</p> <ul style="list-style-type: none"> - circuit breakers, - thermal sensing controls, - thermal motor protectors (excluding hermetic thermal motor protectors), - AC switches rated at: <ul style="list-style-type: none"> - 6 A and more at 250 V AC and more, or - 12 A and more at 125 V AC and more, - DC switches rated at 20 A and more at 18 V DC and more, and - switches for use at voltage supply frequency ≥ 200 Hz. <p>13b. Cadmium in filter glasses and glasses used for reflectance standards</p> <p>Applies to categories 8, 9 and 11; expires on:</p> <ul style="list-style-type: none"> -21 July 2023 for category 8 in vitro diagnostic medical devices -21 July 2024 for category 9 industrial monitoring and control instruments and for category 11 -21 July 2021 for other subcategories of categories 8 and 9 <p>13b(II). Cadmium in striking optical filter glass types; excluding applications falling under point 39 of this Annex</p> <p>Applies to categories 1 to 7 and 10; expires on: expires on 21 July 2021 for categories 1 to 7 and 10</p> <p>13b(III). Cadmium in glazes used for reflectance standards</p> <p>Applies to categories 1 to 7 and 10; expires on: expires on 21 July 2021 for categories 1 to 7 and 10</p> <p>21. Cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses</p> <p>30. —Delete—</p> <p>used in high-powered loudspeakers with sound pressure levels of 100dB (A) and more</p> <p>35. —Delete—</p> <p>38. —Delete—</p> <p>39. —Delete—</p> <p>40. —Delete—</p>
Hexavalent chromium	<p>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</p> <p>28. —Delete—</p>
PBDE	<p>9a. —Delete—</p>
Perfluorooctane sulfonates (PFOS)	<p>a. Photo resist or antireflective coating agent for photolithography process</p> <p>b. Photographic coating agent for films, papers or plates</p>
Dibutyltin (DBT) compounds	<p>a. —Delete—</p> <p>b. —Delete—</p> <p>c. —Delete—</p> <p>d. —Delete—</p> <p>e. —Delete—</p>

< Note > Though this list was created in accordance with the Official Journal of European Union "2010/276/EU" issued on March 2010, "2010/571/EU" issued on September 2010, "2011/534/EU" issued on September 2011, "2011/65/EU" issued on July 2011 and "2015/863/EU" issued on June 2015, the content does not provide any guarantees against the conformity with it. Please refer to the original for the latest information.

* The exclusion use which makes only category 8 or 9 the subject depends on Annex IV of the EU gazette " 2011/65/EU