

Common Product Environment Procurement Specification		Spec.No	KS002-05-1A																																																																									
		Compiled	December 16, 2011																																																																									
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		Proterial, Ltd. Ibaraki Works Hitaka Quality assurance Dept.																																																																										
Name	Content chemical substance common procurement specification (Applies to packaging materials)	Approved	Reviewed	Prepared																																																																								
		T. Sasaki April 13, 2023	K. Yokoyama April 13, 2023	K. Yokoyama April 13, 2023																																																																								
<p>1. Application This specification applies to the products that are quoted this specification by such as "Order form", "Individual procurement specifications", "Drawings" and etc. This specification is aimed at packaging materials that used for Electric Wire &amp; Cable Business Unit Ibaraki Works' products. The requirements are partly different from these of "Electric Wire &amp; Cable Business Unit Ibaraki Works' Green Procurement Standards (HKS01 Version 5.1)".</p> <p>2. Requirements 2-1 Prohibited Substances The following chemical substances must not be used intentionally, and the contained concentration as an impurity must be below the maximum allowable value if it is shown.</p> <p>(1) "Law concerning the examination and regulation of manufacture etc., of chemical substances (Japan)," (Class 1 specified chemical substances)</p> <p>(2) Prohibition Substances of Manufacturing, etc. of "Industrial Safety and Health Law (Japan)"</p> <p>(3) A specific toxic substance of "Poisonous and Deleterious Substances Control Act (Japan)"</p> <p>(4) The chemical substances shown in Table 1.</p> <p style="text-align: center;">Table 1. Prohibited Substances Group List (1/2)</p> <table border="1"> <thead> <tr> <th>No.</th> <th>Prohibited chemical substances</th> <th>Maximum allowable value *1,*2</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Cadmium and its compounds</td> <td rowspan="4">A total of 100 ppm *3</td> </tr> <tr> <td>2</td> <td>Hexavalent chromium compounds</td> </tr> <tr> <td>3</td> <td>Lead and its compounds</td> </tr> <tr> <td>4</td> <td>Mercury and its compounds</td> </tr> <tr> <td>5</td> <td>Polybromobiphenyl (PBB group)</td> <td>1,000ppm</td> </tr> <tr> <td>6</td> <td>Polybromodiphenyl ether group (PBDE group)(Incl. decaBDE)</td> <td>Intentional use prohibited *4 and 1,000ppm</td> </tr> <tr> <td>7</td> <td>Tri-substituted organostannic compounds (Incl. 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Tributyl tin oxide(TBTO) (CAS No. 56-35-9), Tributyltin (TBT), Triphenyltin group (TPT) )	Intentional use prohibited *4, and per material 1,000ppm *3	8	Polychlorinated biphenyl group (PCB group) and specified alternative *5	Intentional use prohibited *4	9	Polychlorinated terphenyls(PCTs group)	Intentional use prohibited *4	10	Polychlorinated naphthalene (with 1 or more chlorines)	Intentional use prohibited *4	11	Short-chain paraffin chloride (carbon chain length between 10 and 13)	Intentional use prohibited *4	12	Asbestos group	Intentional use prohibited *4 and 1,000ppm	13	Specified azo dyes/pigments *6 *7	30 ppm (as Specified amines)	14	Ozone layer depleting substances	Intentional use prohibited *4	15	Radioactive materials	Intentional use prohibited *4	16	Formaldehyde (CAS No. 50-00-0)	Intentional use prohibited *4	17	Perfluorooctane sulfonate (PFOS) and its compounds	Intentional use prohibited *4	18	Phenol,2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl) (CAS No. 3846-71-7)	Intentional use prohibited *4	19	Dimethyl fumarate (CAS No.624-49-7)	Intentional use prohibited *4	20	Dibutyltin (DBT) compounds	Per material 1,000ppm *3	21	Cobalt dichloride (CAS No. 7646-79-9)	Intentional use prohibited *4	22	Hexabromocyclododecane (HBCDD) *7	Intentional use prohibited *4 and 100ppm	23	Perfluorooctanoic acid (PFOA) and its salts and related substances *7	Intentional use prohibited, and PFOA: 0.025ppm Total of PFOA's; 1ppm	24	Hexachlorobenzene (CAS No.118-74-1)	Intentional use prohibited *4 and 10ppm
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Table 1. Prohibited Substances Group List (2/2)

No.	Prohibited chemical substances	Maximum allowable value *1,*2
25	Polyvinyl chlorides (PVCs) and its mixture, its copolymer	Intentional use prohibited for plastic material *4 *8
26	Bis (2-ethylhexyl) phthalate (DEHP(DOP)) (CAS No. 117-81-7)	1000ppm as the sum of the phthalate in plasticized material
27	Benzyl butyl phthalate (BBP) (CAS No. 85-68-7)	
28	Dibutyl phthalate (DBP)(CAS No. 84-74-2)	
29	Diisobutyl phthalate (DIBP) (CAS No. 84-69-5)	
30	Phenol, isopropylated phosphate (3:1) (PIP (3:1)) (CAS No.68937-41-7)	Intentional use prohibited
31	Pentachlorothiophenol (PCTP) (CAS No.133-49-3)	Intentional use prohibited
32	Perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain (C9-C14 PFCAs), their salts and C9-C14 PFCA-related substances	Intentional use prohibited * 4 and The sum of C9-C14 PFCAs and their salts: 0.025 ppm, The sum of C9-C14 PFCA-related substances: 0.26 ppm
33	Perfluorohexane sulfonic acid (PFHxS), its salts, and PFHxS-related compounds	Intentional use prohibited * 4 and PFHxS: 0.025 ppm, The sum of PFHxS-related substances: 1ppm
34	1,6,7,8,9,14,15,16,17,17,18,18- Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10] octadeca-7,15-diene ("Dechlorane Plus"™) covering any of its individual anti- and syn-isomers or any combination thereof (CAS No.13560-89-9, 135821-03-3, 135821-74-8)	Intentional use prohibited
35	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	Intentional use prohibited
36	Mineral oil in inks used for packaging materials and general printed matter (such as test reports packaged with products) *9 - Mineral oil aromatic hydrocarbons (MOAH) containing 1 to 7 aromatic rings - Mineral oil saturated hydrocarbons (MOSH) containing 16 to 35 carbon atoms * France's Mineral Oil Regulation (Ministerial Order JORF n°0102 of 3 May 2022)	Concentration in undiluted ink solution - Total MOAH of 3 to 7 aromatic rings: 1 ppm - MOAH with 1 to 7 aromatic rings: 0.1% - MOSH with 16 to 35 carbon atoms: 0.1%

\*1 The denominator of the concentration value is the mass of the homogeneous material that cannot be disassembled mechanically into different materials .

\*2 With no volatile component. No. 36 only the concentration of ink undiluted solution.

\*3 The rated value as mass of metallic elements

\*4 Intentional use means deliberate uses of such banned chemical substances during the formulation of the product or its parts in case continuous presence of such substances is desired to provide a specific characteristic, appearance, property, attribute or quality.

\*5 The specified alternatives for the PCB group are listed below.

1) Mono methyl tetrachloro diphenylmethane (CAS No.76253-60-6)

2) Mono methyl dichloro diphenylmethane (CAS No.81161-70-8)

3) Mono methyl dibromo diphenylmethane (DBBT) (CAS No.99688-47-8)

\*6 Azo-dyes/pigments forming specified amines.

\*7 Refer to HKS\_Annex.

\*8 Customer requirements for plastic materials of packing

\*9 Refer to Table 2 for MOAH and Table 3 for MOSH. No.36 applies to inks used for packaging materials and general printed matter distributed in France from January 1, 2025. Since it is limited to the products that our company exports to France, we request submission of a warranty of non-inclusion that complies with mineral oil regulations, which is different from that for general packaging materials.

## 2-2 Controlled Chemical Substances

Refer to the latest edition of Electric Wire & Cable Business Unit Ibaraki Works' Green Procurement Standards (HKS01 Version 5.1)

## 3. Submission of Information on Chemical Substances Included in Delivered Products ("Warranty of Non-inclusion Concerning Chemical Substances in Delivered Products," "Product Composition Data," "Analysis Report," and "Safety Data Sheet (SDS)")

Refer to the latest edition of Electric Wire & Cable Business Unit Ibaraki Works' Green Procurement Standards (HKS01 Version 5.1)

Table 2 Examples of MOAH (substances with an aromatic ring (benzene ring) in the molecule)

- ① Substances with one aromatic ring: benzene, toluene, xylene, ethylbenzene, o-xylene, p-xylene, butylbenzene, styrene
- ② Substance with two aromatic rings: naphthalene
- ③ Substances with three aromatic rings: anthracene (SVHC), phenanthrene (SVHC), fluorene
- ④ Substances with four aromatic rings: pyrene (SVHC), chrysene (SVHC, specific PAH), fluoranthene (SVHC), naphthacene, Benzo[a]anthracene (SVHC, specific PAH), 7,12-dimethyltetraphene
- ⑤ Substances with five aromatic rings: benzo[a]pyrene (SVHC, specific PAH), benzo[b]fluoranthene (specific PAH), Pentacene, benzo[k]tetraphene (specific PAH)
- ⑥ Substances with 6 aromatic rings: benzo[g,h,l]perylene (SVHC), hexacene
- ⑦ Substance with 7 aromatic rings: Heptacene

Table 3 Examples of MOSH (the chemical formula is a hydrocarbon in which all carbon-carbon bonds are single bonds, and the general formula is  $C_nH_{2n+2}$ )

Hexadecane (n=16):  $C_{16}H_{34}$ , Heptadecane (n=17):  $C_{17}H_{36}$ , Octadecane (n=18):  $C_{18}H_{38}$ ,  
 Nonadecane (n=19):  $C_{19}H_{40}$ , Eicosane (n=20):  $C_{20}H_{42}$ , Henicosane (n=21)  $C_{21}H_{44}$ , Docosane (n=22)  $C_{22}H_{46}$ ,  
 tricosane (n=23)  $C_{23}H_{48}$ , tetracosane (n=24)  $C_{24}H_{50}$ , pentacosane (n=25)  $C_{25}H_{52}$ , hexacosane (n=26)  $C_{26}H_{54}$ ,  
 Heptacosane (n=27)  $C_{27}H_{56}$ , Octacosane (n=28)  $C_{28}H_{58}$ , Nonacosane (n=29)  $C_{29}H_{60}$ , Triacontane (n=30)  $C_{30}H_{62}$ ,  
 hentriacontane (n=31)  $C_{31}H_{64}$ , dotriacontane (n=32)  $C_{32}H_{66}$ , tritriacontane (n=33)  $C_{33}H_{68}$ ,  
 Tetratriacontane (n=34)  $C_{34}H_{70}$ , Pentatriacontane (n=35)  $C_{35}H_{72}$