

Warranty for hazardous substances

We hereby warrant that the hazardous substances contained in the products shall not exceed the maximum content rate set out below.

<Applied Products>

Customer Parts No.	Sharp Model No.	Customer Parts No.	Sharp Model No.
-	PC817X2NSZW	-	PC851XNNSZ0F
-	PC817X3NSZW	-	PC851XNNIP0F
-	PC817X2NIP0F	-	PR3BMF51NSLF

<Hazardous Substances and Maximum content rate>

Hazardous substances	CAS Number	maximum content rate(ppm)
anthracene	120-12-7	1000
4,4'-diaminodiphenylmethane;	101-77-9	1000
Dibutyl phthalate	84-74-2	1000
Cobalt dichloride	7646-79-9	1000
Diarsenic pentaoxide	1303-28-2	1000
Diarsenic trioxide	1327-53-3	1000
Sodium dichromate and its dihydrate	-	1000
Sodium dichromate	10588-01-9	
Sodium dichromate, dihydrate	7789-12-0	
5-tert-butyl-2,4,6-trinitro-m-xylene(musk xylene)	81-15-2	1000
Bis(2-ethylhexyl) phthalate	117-81-7	1000
Hexabromocyclododecane and all major diastereoisomers identified	-	1000
Hexabromocyclododecane	25637-99-4	
1,2,5,6,9,10-hexabromocyclododecane	3194-55-6	
alpha-hexabromocyclododecane	134237-50-6	
beta-hexabromocyclododecane	134237-51-7	
gamma-hexabromocyclododecane	134237-52-8	
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	1000
Bis(tributyltin)oxide	56-35-9	1000
Lead hydrogen arsenate	7784-40-9	1000
Triethyl arsenate	15606-95-8	1000
Benzyl butyl phthalate	85-68-7	1000
2,4-Dinitrotoluene	121-14-2	1000
Anthracene oil	90640-80-5	1000
Anthracene oil, anthracene paste, distn. Lights	91995-17-4	1000
Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	1000
Anthracene oil, anthracene-low	90640-82-7	1000
Anthracene oil, anthracene paste	90640-81-6	1000
Diisobutyl phthalate	84-69-5	1000
Aluminosilicate, Refractory Ceramic Fibres**	(JAMP-SN0055)	1000
Zirconia Aluminosilicate, Refractory Ceramic Fibres**	(JAMP-SN0007)	1000
Lead chromate	7758-97-6	1000
Lead chromate molybdate sulfate red (C.I. Pigment Red 104)	12656-85-8	1000
Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	1000
Acrylamide	79-06-1	1000
Tris(2-chloroethyl) phosphate	115-96-8	1000
Coal tar pitch, high temperature	65996-93-2	1000
Trichloroethylene	79-01-6	1000
Boric acid	10043-35-3, 11113-50-1	1000
Disodium tetraborate,anhydrous	1330-43-4, 12179-04-3, 1303-96-4	1000
Tetraboron disodium heptaoxide,hydrate	12267-73-1	1000
Sodium chromate	7775-11-3	1000
Potassium chromate	7789-00-6	1000
Ammonium dichromate	7789-09-5	1000
Potassium dichromate	7778-50-9	1000
Cobalt(II) sulphate	10124-43-3	1000
Cobalt(II) dinitrate	10141-05-6	1000
Cobalt(II) carbonate	513-79-1	1000
Cobalt(II) diacetate	71-48-7	1000
2-Methoxyethanol	109-86-4	1000
2-Ethoxyethanol	110-80-5	1000
Chromium trioxide	1333-82-0	1000
Chromic acid	7738-94-5	
Dichromic acid	13530-68-2	1000
Oligomers of chromic acid dichromic acid	-	
2-Ethoxyethyl acetate	111-15-9	1000
Strontium chromate	7789-06-2	1000
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	1000
Hydrazine	302-01-2,7803-57-8	1000
1-Methyl-2-pyrrolidone	872-50-4	1000
1,2,3-Trichloropropane	96-18-4	1000
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	1000
Dichromium tris(chromate)	24613-89-6	1000
Potassium hydroxyoctaoxodizincatedi-chromate	11103-86-9	1000
Pentazinc chromate octahydroxide	49663-84-5	1000
Formaldehyde, oligomeric reaction products with aniline [technical MDA]	25214-70-4	1000
Bis(2-methoxyethyl) phthalate	117-82-8	1000
2-Methoxyaniline; o-Anisidine	90-04-0	1000
4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol)	140-66-9	1000
1,2-Dichloroethane	107-06-2	1000
Bis(2-methoxyethyl) ether	111-96-6	1000
Arsenic acid	7778-39-4	1000
Calcium arsenate	7778-44-1	1000
Trilead diarsenate	3687-31-8	1000
N,N-dimethylacetamide [DMAC]	127-19-5	1000
2,2'-dichloro-4,4'-methylenedianiline [MOCA]	101-14-4	1000
Phenolphthalein	77-09-8	1000
Lead azide Lead diazide	13424-46-9	1000
Lead styphnate	15245-44-0	1000
Lead dipicrate	6477-64-1	1000

<Hazardous Substances and Maximum content rate>

Hazardous substances	CAS Number	maximum content rate(ppm)
1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	1000
1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	1000
Diboron trioxide	1303-86-2	1000
Formamide	75-12-7	1000
Lead(II) bis(methanesulfonate)	17570-76-2	1000
1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (TGIC)	2451-62-9	1000
1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β-TGIC)	59653-74-6	1000
4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	1000
N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	1000
[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26)	2580-56-5	1000
[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3)	548-62-9	1000
α, α'-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4)	6786-83-0	1000
4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol	561-41-1	1000
Pyrochlore, antimony lead yellow	8012-00-8	1000
6-methoxy-m-toluidine (p-cresidine)	120-71-8	1000
Henicosfluoroundecanoic acid	2058-94-8	1000
Hexahydromethylphthalic anhydride [1], Hexahydro-4-methylphthalic anhydride [2], Hexahydro-1-methylphthalic anhydride [3], Hexahydro-3-methylphthalic anhydride [4] [The individual isomers [2], [3] and [4] (including their cis- and trans- stereo isomeric f	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9	1000
Cyclohexane-1,2-dicarboxylic anhydride [1], cis-cyclohexane-1,2-dicarboxylic anhydride [2], trans-cyclohexane-1,2-dicarboxylic anhydride [3] [The individual cis- [2] and trans- [3] isomer substances and all possible combinations of the cis- and trans-isom	85-42-7, 13149-00-3, 14166-21-3	1000
Dibutyltin dichloride (DBTC)	683-18-1	1000
Lead bis(tetrafluoroborate)	13814-96-5	1000
Lead dinitrate	10099-74-8	1000
Silicic acid, lead salt	11120-22-2	1000
4-Aminoazobenzene	60-09-3	1000
Lead titanium zirconium oxide	12626-81-2	1000
Lead monoxide (lead oxide)	1317-36-8	1000
o-Toluidine	95-53-4	1000
3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	1000
Silicic acid (H ₂ SiO ₅), barium salt (1:1), lead-doped		
[with lead (Pb) content above the applicable generic concentration limit for 'toxicity for reproduction' Repr. 1A (CLP) or category 1 (DSD); the substance is a member of the group entry of lead compounds, with index number 082-001-00-6 in Regulation (EC)	68784-75-8	1000
Trilead bis(carbonate)dihydroxide	1319-46-6	1000
Furan	110-00-9	1000
N,N-dimethylformamide	68-12-2	1000
4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	-	1000
4-Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a c	-	1000
4,4'-methylenedi-o-toluidine	838-88-0	1000
Diethyl sulphate	64-67-5	1000
Dimethyl sulphate	77-78-1	1000
Lead oxide sulfate	12036-76-9	1000
Lead titanium trioxide	12060-00-3	1000
Acetic acid, lead salt, basic	51404-69-4	1000
[Phthalato(2-)]dioxotrilead	69011-06-9	1000
Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	1000
N-methylacetamide	79-16-3	1000
Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	1000
1,2-Diethoxyethane	629-14-1	1000
Tetralead trioxide sulphate	12202-17-4	1000
N-pentyl-isopentylphthalate	776297-69-9	1000
Dioxobis(stearato)trilead	12578-12-0	1000
Tetraethyllead	78-00-2	1000
Pentalead tetraoxide sulphate	12065-90-6	1000
Pentacosfluorotridecanoic acid	72629-94-8	1000
Tricosfluorododecanoic acid	307-55-1	1000
Heptacosfluorotetradecanoic acid	376-06-7	1000
1-bromopropane (n-propyl bromide)	106-94-5	1000
Methoxyacetic acid	625-45-6	1000
4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	1000
Methyloxirane (Propylene oxide)	75-56-9	1000
Trilead dioxide phosphonate	12141-20-7	1000
o-aminoazotoluene	97-56-3	1000
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	1000
4,4'-oxydianiline and its salts	101-80-4	1000
Orange lead (lead tetroxide)	1314-41-6	1000
Biphenyl-4-ylamine	92-67-1	1000
Diisopentylphthalate	605-50-5	1000
Fatty acids, C16-18, lead salts	91031-62-8	1000
Diazene-1,2-dicarboxamide (G.C'-azodi(formamide))	123-77-3	1000
Sulfurous acid, lead salt, dibasic	62229-08-7	1000
Lead cyanamidate	20837-86-9	1000
Cadmium	7440-43-9	1000
Cadmium oxide	1306-19-0	1000
Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	1000
Pentadecafluorooctanoic acid (PFOA)	335-67-1	1000

<Hazardous Substances and Maximum content rate>

Hazardous substances	CAS Number	maximum content rate(ppm)
Dipentyl phthalate (DPP)	131-18-0	1000
4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof]	-	1000
Cadmium sulphide	1306-23-6	1000
Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo]-5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38)	1937-37-7	1000
Dihexyl phthalate	84-75-3	1000
Imidazolidine-2-thione: (2-imidazoline-2-thiol)	96-45-7	1000
Triethyl phosphate	25155-23-1	1000
Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	1000
Lead di(acetate)	301-04-2	1000
Cadmium chloride	10108-64-2	1000
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	1000
Sodium peroxometaborate	7632-04-4	1000
Sodium perborate; perboric acid, sodium salt	-	1000
Cadmium fluoride	7790-79-6	1000
Cadmium sulphate	10124-36-4, 31119-53-6	1000
2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	1000
2-(2H-benzotriazol-2-yl)-4,6-ditertbutylphenol (UV-328)	25973-55-1	1000
2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate	15571-58-1	1000
Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)	-	1000
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5)	-	1000
5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual isomers of [1] and [2] or any combination thereof]	-	1000
*Perfluorononan-1-oi-c-acid and its sodium and ammonium salts	375-95-1, 21049-39-8, 4149-60-4	1000
*Nitrobenzene	98-95-3	1000
*2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	1000
*2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	1000
*1,3-propanesultone	1120-71-4	1000

* 14th new substances

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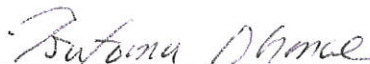
SHARP CORPORATION,

ELECTRONIC COMPONENTS AND DEVICES COMPANY,

SYSTEM DEVICE BUSINESS UNIT

Quality Assurance Department

signature;



Responsible Person:

Tsutomu Ohmae
Senior Manager of Quality Assurance Dept.