



Test Report

Number: SHAH00627913

Applicant: RAYCHEM ELECTRONICS (SHANGHAI) LTD.
NO.307 QIN JIANG ROAD SHANGHAI P.R CHINA
Attn: SHEN YUE DONG

Date: 11 Dec, 2015

Sample Description:

One(1) group of submitted sample said to be : Black plastic tube
Item Name : V4-9.0-0-FSP-SM
Lot No. : 201754786

Tests Conducted:

As requested by the applicant, for details refer to attached page(s).

Conclusion:

<u>Tested Samples</u>	<u>Standard</u>	<u>Result</u>
Submitted sample	EU REACH Regulation No 1907/2006 Article 33(1) Obligation to provide information of safe use (see REACH requirement in report for details)	See test conducted

To be continued

Authorized By:
For Intertek Testing Services Ltd., Shanghai

Leo Shi
General Manager



Tests Conducted

SVHC Testing

By a combination of X-Ray Fluorescence Spectroscopy, Inductively Coupled Argon Plasma Spectrometry, Gas Chromatography – Mass Spectrometry, Liquid Chromatography - Mass Spectrometry, UV-VIS Spectrophotometer, Ion Chromatography, Gas Chromatography - Electron Capture Detector, Headspace Gas Chromatography - Mass Spectrometry and High-Performance Liquid Chromatography.

(a) The First List (15 SVHC Released in Oct, 2008)

<u>Chemical Substance</u>	<u>CAS No.</u>	<u>Results % (w/w)</u>
		<u>Whole product</u>
Cobalt Dichloride Δ	7646-79-9	ND
Diarsenic Pentaoxide Δ	1303-28-2	ND
Diarsenic Trioxide Δ	1327-53-3	ND
Lead Hydrogen Arsenate Δ	7784-40-9	ND
Triethyl Arsenate Δ	15606-95-8	ND
Sodium Dichromate Δ	7789-12-0, 10588-01-9	ND
Bis (Tributyltin) Oxide (TBTO) Δ	56-35-9	ND
Anthracene	120-12-7	ND
4,4'-Diaminodiphenylmethane (MDA)	101-77-9	ND
Hexabromocyclododecane (HBCDD) and All Major Diastereoisomers Identified (α-HBCDD, β-HBCDD, γ-HBCDD)	25637-99-4 and 3194-55-6 (134237-50-6, 134237-51-7, 134237-52-8)	ND
5-Tert-Butyl-2,4,6-Trinitro-m-Xylene (Musk Xylene)	81-15-2	ND
Bis (2-Ethylhexyl) Phthalate (DEHP)	117-81-7	ND
Dibutyl Phthalate (DBP)	84-74-2	ND
Benzyl Butyl Phthalate (BBP)	85-68-7	ND
Short Chain Chlorinated Paraffins (C ₁₀₋₁₃)	85535-84-8	ND

(b) The Second List (13 SVHC Release in Jan, 2010 and Mar, 2010)

<u>Chemical Substance</u>	<u>CAS No.</u>	<u>Results % (w/w)</u>
		<u>Whole product</u>
Lead Chromate Δ	7758-97-6	ND
Lead Chromate Molybdate Sulphate Red (C.I. Pigment Red 104) Δ	12656-85-8	ND
Lead Sulfochromate Yellow (C.I. Pigment Yellow 34) Δ	1344-37-2	ND
Tris (2-Chloroethyl) Phosphate	115-96-8	ND
2,4-Dinitrotoluene	121-14-2	ND
Diisobutyl Phthalate (DIBP)	84-69-5	ND
Coal Tar Pitch, High Temperature	65996-93-2	ND
Anthracene Oil	90640-80-5	ND
Anthracene Oil, Anthracene Paste, Distn. Lights	91995-17-4	ND
Anthracene Oil, Anthracene Paste, Anthracene Fraction	91995-15-2	ND
Anthracene Oil, Anthracene-low	90640-82-7	ND
Anthracene Oil, Anthracene Paste	90640-81-6	ND
Acrylamide	79-06-1	ND

To be continued

Tests Conducted

(c) The Third List (8 SVHC Release in Jun,2010)

<u>Chemical Substance</u>	<u>CAS No.</u>	<u>Results % (w/w)</u>
		<u>Whole product</u>
Boric Acid Δ	10043-35-3, 11113-50-1	#1
Disodium Tetraborate, Anhydrous Δ	1330-43-4, 12179-04-3, 1303-96-4	#1
Tetraboron Disodium Heptaoxide, Hydrate Δ	12267-73-1	#1
Sodium Chromate Δ	7775-11-3	ND
Potassium Chromate Δ	7789-00-6	ND
Ammonium Dichromate Δ	7789-09-5	ND
Potassium Dichromate Δ	7778-50-9	ND
Trichloroethylene	79-01-6	ND

(d) The Fourth List (8 SVHC Release in Dec,2010)

<u>Chemical Substance</u>	<u>CAS No.</u>	<u>Results % (w/w)</u>
		<u>Whole product</u>
2-Methoxyethanol	109-86-4	ND
2-Ethoxyethanol	110-80-5	ND
Cobalt Sulphate Δ	10124-43-3	ND
Cobalt Dinitrate Δ	10141-05-6	ND
Cobalt Carbonate Δ	513-79-1	ND
Cobalt Diacetate Δ	71-48-7	ND
Chromium Trioxide Δ	1333-82-0	ND
Chromic Acid Δ Dichromic Acid Δ Oligomers of Chromic Acid and Dichromic Acid Δ	7738-94-5 13530-68-2 --	ND

(e) The Fifth List (7 SVHC Release in Jun, 2011)

<u>Chemical Substance</u>	<u>CAS No.</u>	<u>Results % (w/w)</u>
		<u>Whole product</u>
Strontium ChromateΔ	7789-06-2	ND
2-ethoxyethyl acetate (2-EEA)	111-15-9	ND
1,2-Benzenedicarboxylic acid, di-C ₇₋₁₁ - branched and linear alkyl esters (DHNUP)	68515-42-4	ND
Hydrazine	7803-57-8 302-01-2	ND
1-methyl-2-pyrrolidone	872-50-4	ND
1,2,3-trichloropropane	96-18-4	ND
1,2-Benzenedicarboxylic acid, di-C ₆₋₈ - branched alkyl esters, C ₇ -rich (DIHP)	71888-89-6	ND

To be continued

Tests Conducted

(f) The Sixth List (20 SVHC Release in Dec, 2011)

Chemical Substance	CAS No.	Results % (w/w)
		Whole product
Lead dipicrate Δ	6477-64-1	ND
Lead styphnate Δ	15245-44-0	ND
Lead azide; Lead diazide Δ	13424-46-9	ND
Phenolphthalein	77-09-8	ND
2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4	ND
N,N-dimethylacetamide (DMAC)	127-19-5	ND
Trilead diarsenate Δ	3687-31-8	ND
Calcium arsenate Δ	7778-44-1	ND
Arsenic acid Δ	7778-39-4	ND
Bis(2-methoxyethyl) ether	111-96-6	ND
1,2-Dichloroethane	107-06-2	ND
4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol)	140-66-9	ND
2-Methoxyaniline; o-Anisidine	90-04-0	ND
Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8	ND
Formaldehyde, oligomeric reaction products with aniline (technical MDA)	25214-70-4	ND
Pentazinc chromate octahydroxide Δ	49663-84-5	ND
Potassium hydroxyoctaoxodizincate di-chromate Δ	11103-86-9	ND
Dichromium tris(chromate) Δ	24613-89-6	ND
Aluminosilicate Refractory Ceramic Fibres Δ	(Index No. 650-017-00-8)	ND
Zirconia Aluminosilicate Refractory Ceramic Fibres Δ	(Index No. 650-017-00-8)	ND

To be continued

Tests Conducted

(g) The Seventh List (13 SVHC Release in Jun, 2012)

Chemical Substance	CAS No.	Results % (w/w)
		Whole product
1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	ND
1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	ND
Diboron trioxide Δ	1303-86-2	#1
Formamide	75-12-7	ND
Lead(II) bis(methanesulfonate) Δ	17570-76-2	ND
TGIC (1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione)	2451-62-9	ND
β -TGIC (1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione)	59653-74-6	ND
4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	ND
N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	ND
[4-[4,4'-bis(dimethylamino)benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) [with $\geq 0.1\%$ of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	548-62-9	ND
[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) [with $\geq 0.1\%$ of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	2580-56-5	ND
α,α -Bis[4-(dimethylamino)phenyl]-4-(phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) [with $\geq 0.1\%$ of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	6786-83-0	ND
4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [with $\geq 0.1\%$ of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	561-41-1	ND

To be continued

Tests Conducted

(h) The Eighth List (54 SVHC Release in Dec, 2012)

Chemical Substance	CAS No.	Results % (w/w)
		Whole product
Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	ND
Pentacosfluorotridecanoic acid	72629-94-8	ND
Tricosfluorododecanoic acid	307-55-1	ND
Henicosfluoroundecanoic acid	2058-94-8	ND
Heptacosfluorotetradecanoic acid	376-06-7	ND
Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	ND
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-isomers [1] are covered by this entry].	85-42-7 13149-00-3 14166-21-3	ND
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 forms) and all possible combinations of the isomers [1] are covered by this entry]	25550-51-0 19438-60-9 48122-14-1 57110-29-9	ND
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 combination thereof]	--	ND

To be continued

Tests Conducted

Chemical Substance	CAS No.	Results % (w/w)
		Whole product
4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	--	ND
Methoxyacetic acid	625-45-6	ND
N,N-dimethylformamide	68-12-2	ND
Dibutyltin dichloride (DBTC) Δ	683-18-1	ND
Lead monoxide (Lead oxide) Δ	1317-36-8	ND
Orange lead (Lead tetroxide) Δ	1314-41-6	ND
Lead bis(tetrafluoroborate) Δ	13814-96-5	ND
Trilead bis(carbonate)dihydroxide Δ	1319-46-6	ND
Lead titanium trioxideΔ	12060-00-3	ND
Lead titanium zirconium oxideΔ	12626-81-2	ND
Silicic acid, lead salt Δ	11120-22-2	ND
Silicic acid (H ₂ SiO ₅), barium salt (1:1), lead-dopedΔ [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) No 1272/2008]	68784-75-8	ND
1-bromopropane (n-propyl bromide)	106-94-5	ND
Methyloxirane (Propylene oxide)	75-56-9	ND
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	ND
Diisopentylphthalate (DIPP)	605-50-5	ND
N-pentyl-isopentylphthalate	776297-69-9	ND
1,2-diethoxyethane	629-14-1	ND
Acetic acid, lead salt, basicΔ	51404-69-4	ND
Lead oxide sulfateΔ	12036-76-9	ND

To be continued

Tests Conducted

Chemical Substance	CAS No.	Results % (w/w)
		Whole product
[Phthalato(2-)]dioxotrileadΔ	69011-06-9	ND
Dioxobis(stearato)trileadΔ	12578-12-0	ND
Fatty acids, C16-18, lead saltsΔ	91031-62-8	ND
Lead cyanamidateΔ	20837-86-9	ND
Lead dinitrateΔ	10099-74-8	ND
Pentalead tetraoxide sulphateΔ	12065-90-6	ND
Pyrochlore, antimony lead yellowΔ	8012-00-8	ND
Sulfurous acid, lead salt, dibasicΔ	62229-08-7	ND
TetraethylleadΔ	78-00-2	ND
Tetralead trioxide sulphateΔ	12202-17-4	ND
Trilead dioxide phosphonateΔ	12141-20-7	ND
Furan	110-00-9	ND
Diethyl sulphate	64-67-5	ND
Dimethyl sulphate	77-78-1	ND
3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	ND
Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	ND
4,4'-methylenedi-o-toluidine	838-88-0	ND
4,4'-oxydianiline and its salts	101-80-4	ND
4-aminoazobenzene	60-09-3	ND
4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	ND
6-methoxy-m-toluidine (p-cresidine)	120-71-8	ND
Biphenyl-4-ylamine	92-67-1	ND
o-aminoazotoluene [(4-o-tolylazo-o-toluidine)]	97-56-3	ND
o-toluidine	95-53-4	ND
N-methylacetamide	79-16-3	ND

To be continued

Tests Conducted

(i) The ninth List (6 SVHC Release in Jun, 2013)

<u>Chemical Substance</u>	<u>CAS No.</u>	<u>Results % (w/w)</u>
		<u>Whole product</u>
Cadmium Δ	7440-43-9	ND
Cadmium oxide Δ	1306-19-0	ND
Dipentyl phthalate (DPP)	131-18-0	ND
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]	--	ND
Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	ND
Pentadecafluorooctanoic acid (PFOA)	335-67-1	ND

(j) The tenth List (7 SVHC Release in Dec, 2013)

<u>Chemical Substance</u>	<u>CAS No.</u>	<u>Results % (w/w)</u>
		<u>Whole product</u>
Cadmium sulphide Δ	1306-23-6	ND
Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	ND
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	ND
Dihexyl phthalate	84-75-3	ND
Imidazolidine-2-thione (2-imidazoline-2-thiol)	96-45-7	ND
Lead di(acetate) Δ	301-04-2	ND
Trixylyl phosphate	25155-23-1	ND

To be continued

Tests Conducted

(k) The eleventh List (4 SVHC Release in Jun, 2014)

<u>Chemical Substance</u>	<u>CAS No.</u>	<u>Results % (w/w)</u>
		<u>Whole product</u>
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	ND
Cadmium chloride Δ	10108-64-2	ND
Sodium perborate; Perboric acid, sodium salt Δ	--	ND
Sodium peroxometaborate Δ	7632-04-4	ND

(l) The twelfth List (6 SVHC Release in December, 2014)

<u>Chemical Substance</u>	<u>CAS No.</u>	<u>Results % (w/w)</u>
		<u>Whole product</u>
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	ND
2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	ND
2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	ND
Cadmium fluoride Δ	7790-79-6	ND
Cadmium sulphate Δ	10124-36-4; 31119-53-6	ND
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)	--	ND

To be continued

Tests Conducted

(m) The thirteenth List (2 SVHC Release in June, 2015)

Chemical Substance	CAS No.	Results % (w/w)
		Whole product
1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with \geq 0.3% of dihexyl phthalate (EC No. 201-559-5)	68515-51-5; 68648-93-1	ND
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]	--	ND

Reporting limit=0.050% (whole product)

#1 = Boron(B) is found 5800 ppm in Submitted Sample, The Estimated Content of Substance (Boric Acid , Disodium Tetraborate, Anhydrous, Tetraboron disodium heptaoxide, Hydrate, Diboron trioxide,) **MAY BE HIGHER THAN 0.1%** by calculating from the Boron(B) content with adjustment by weight ratio factor.

SVHC = Substance of very high concern

ND = Not detected (the result is less than the reporting limit)

Reporting limit = Quantitation limit of analyte in sample

Δ = Determination was based on elemental analysis. The content was calculated based on assumption of worst-case.

Notes:

1. Substances of very high concern (SVHC) are classified as:
 - a. Carcinogenic, mutagenic or toxic to reproduction category 1 (proven on humans) and category 2 (proven on animals)
 - b. Persistent, bioaccumulative and toxic chemicals (PBT)
 - c. Very persistent and very bioaccumulative chemicals (vPvB)
 - d. Other similar substances such as endocrine disrupters
2. If the imported or manufactured volume of each individual SVHC in article is more than 0.1% (w/w) and if it exceeds 1 tonne per year across all product ranges, then importer or manufacturer require notification to the European Chemical Agency (ECHA). For substances included in the Candidate List on or after 1 December 2010, the notifications have to be submitted no later than 6 months after the inclusion. The following information has to be submitted for notification:
 - a. Identification of the registrant and the substance
 - b. Classification and labelling of the substance
 - c. Description of use of the substance and the article
 - d. Registration number, if available
 - e. Tonnage range

To be continued

Tests Conducted

3. As per article 31 of regulation (EC) No. 1907/2006 (REACH), suppliers of mixtures not classified as dangerous according to directive 1999/45/EC have to provide the recipients, at their request, with a safety data sheet if the mixtures contain at least one substance on the SVHC candidate list and its individual concentration is 0.1%(w/w) or above for non-gaseous preparations.

REACH requirement:

As per article 33(1) of regulation (EC) No. 1907/2006 (REACH), recipients of product must be provided with information of safe use if any of the tested substances (SVHC) exceeded 0.1% (w/w). A product meets the requirement of article 33(1) by default when no SVHC exceeds 0.1% (w/w).

Tested Component(s): See component list in the last section of this report.



Picture of sample

Date sample received: Dec.2, 2015

Testing period: Dec.2, 2015 To Dec.9, 2015

Components List:

- (1) Black plastic tube

End of report

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