



Test Report

Number: SHAH00627938

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 : ZH4-2.5-0-SP-SM
Lot No. : 201749455

Tests Conducted:

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

Conclusion:

Tested Samples

Submitted sample

Standard

EU REACH Regulation No 1907/2006 Article 33(1)
Obligation to provide information of safe use (see
REACH requirement in report for details)

Result

See Test Conducted

To be continued

Authorized By:
For Intertek Testing Services Ltd., Shanghai

Leo Shi
General Manager



Intertek Testing Services Ltd., Shanghai

Block B, Jinling Business Square, No.801 YiShan Road, Shanghai, China. 200233

上海天祥質量技術服務有限公司

上海市宜山路 801 號金陵商務廣場 B 座 200233

Telephone: +86 21 6120 6060 Facsimile: +86 21 6127 9740

www.intertek.com www.intertek.com.cn

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	7738-94-5	ND
Dichromic Acid Δ	13530-68-2	
Oligomers of Chromic Acid and Dichromic Acid Δ	--	

(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 dichromate 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
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

Tests Conducted

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
[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

Tests Conducted

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

(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

To be continued

Tests Conducted

(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 sulphideΔ	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

(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 chlorideΔ	10108-64-2	ND
Sodium perborate; Perboric acid, sodium saltΔ	--	ND
Sodium peroxometaborateΔ	7632-04-4	ND

To be continued

Tests Conducted

(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

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

<u>Chemical Substance</u>	<u>CAS No.</u>	<u>Results % (w/w)</u>
		<u>Whole product</u>
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

To be continued

Tests Conducted

Reporting limit=0.050% (whole product)

#1 = Boron(B) is found 7600 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 disruptors
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
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.

To be continued

Tests Conducted



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

This report is made solely on the basis of your instructions and/or information and materials supplied by you. It is not intended to be a recommendation for any particular course of action. Intertek does not accept a duty of care or any other responsibility to any person other than the Client in respect of this report and only accepts liability to the Client insofar as is expressly contained in the terms and conditions governing Intertek's provision of services to you. Intertek makes no warranties or representations either express or implied with respect to this report save as provided for in those terms and conditions. We have aimed to conduct the Review on a diligent and careful basis and we do not accept any liability to you for any loss arising out of or in connection with this report, in contract, tort, by statute or otherwise, except in the event of our gross negligence or wilful misconduct.