



**BUREAU  
VERITAS**

# TEST REPORT

**Technical Report: (9312)318-0988**

Nov 20, 2012

Date Received: Nov 13, 2012

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KELLY CHAN  
BETTER SOLUTION GRAPHICS CO., LTD  
BUILDING 10, NO 358, SHINAN ROAD, DONGYONG, PANYU, GUANGZHOU

Sample Description: Sample(s) received is/are stated to be:  
Foil Heat Transfer

Color:	Gold/ Silver	Style No(s):	/
Order No.:	/	PO No.:	/
Age Grade:	/	Product End Use:	Garment accessories
Vendor:	/	Retest No.:	/
Manufacturer:	/	Supplier Reference:	/
Buyer:	/	Country of Origin:	/
Test Period:	Nov 13, 2012 to Nov 20, 2012	Country of Destination:	/
Fiber Content:	/		
Care Instruction:	/		

## SAMPLE DESCRIPTION ASSIGNED BY LABORATORY

ITEM	ITEM DESCRIPTION
1	Transparent plastic with golden/ silvery print
2	Transparent plastic with silvery print

## SUMMARY OF TEST RESULTS

TEST REQUESTED	CONCLUSION	REMARK
Candidate List of Substances of Very High Concern for authorization published by European Chemicals Agency (ECHA) Regarding Regulation (EC) No. 1907/2006 concerning REACH	PASS	-

**Bureau Veritas Consumer Products Services  
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**BUREAU VERITAS CONSUMER PRODUCTS SERVICES (GUANGZHOU) CO., LTD**

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APPROVED BY: 

**CHARLES WONG**  
**ANALYTICAL LAB MANAGER**

  
**JOEIE TSANG**  
**REGIONAL LABORATORY DIRECTOR**

**REMARK**

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**Photo of the Submitted Sample**



### TEST RESULT

#### Candidate List of Substances of Very High Concern for authorization published by European Chemicals Agency (ECHA) Regarding Regulation (EC) No. 1907/2006 concerning REACH

No.	Substance name	CAS No.	EC No.	Result, %	Detection Limit, %	Basis for identification as a SVHC
				1		
1	Triethyl arsenate*	15606-95-8	427-700-2	ND	0.01	Carcinogen, cat. 1
2	Anthracene	120-12-7	204-371-1	ND	0.005	PBT
3	4,4'-Diaminodiphenyl methane (MDA)	101-77-9	202-974-4	ND	0.005	Carcinogen, cat. 2
4	Dibutyl phthalate (DBP)	84-74-2	201-557-4	ND	0.005	Toxic for reproduction, cat. 2
5	Cobalt dichloride*	7646-79-9	231-589-4	ND	0.01	Carcinogen, cat. 2
6	Diarsenic pentaoxide*	1303-28-2	215-116-9	ND	0.01	Carcinogen, cat. 1
7	Diarsenic trioxide*	1327-53-3	215-481-4	ND	0.01	Carcinogen, cat. 1
8	Sodium dichromate*	7789-12-0 <sup>(1)</sup> , 10588-01-9 <sup>(2)</sup>	234-190-3	ND	0.01	Carcinogen, cat. 2 Mutagen, cat. 2; Toxic for reproduction, cat. 2
9	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	201-329-4	ND	0.005	vPvB
10	Bis (2-ethylhexyl) phthalate (DEHP)	117-81-7	204-211-0	ND	0.005	Toxic for reproduction, cat. 2
11	Hexabromo cyclododecane (HBCDD) and all major diastereoisomers identified: $\alpha$ - HBCDD $\beta$ - HBCDD $\gamma$ - HBCDD	3194-55-6 <sup>(3)</sup> , 25637-99-4 <sup>(4)</sup>  134237-50-6 134237-51-7 134237-52-8	247-148-4, 221-695-9	ND	0.005	PBT
12	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) (SCCP)	85535-84-8	287-476-5	ND	0.01	PBT, vPvB
13	Bis(tributyltin)oxide (TBTO)**	56-35-9	200-268-0	ND	0.005	PBT
14	Lead hydrogen arsenate*	7784-40-9	232-064-2	ND	0.01	Carcinogen, cat. 1; Toxic for reproduction, cat. 1
15	Benzyl butyl phthalate (BBP)	85-68-7	201-622-7	ND	0.005	Toxic for reproduction, cat. 2
16	2,4-Dinitrotoluene	121-14-2	204-450-0	ND	0.005	Carcinogen, cat. 2
17	Anthracene oil	90640-80-5	292-602-7	ND	0.1	Carcinogen, cat. 2, PBT, vPvB
18	Anthracene oil, anthracene paste, distn. Lights	91995-17-4	295-278-5	ND	0.1	Carcinogen, cat. 2; Mutagen, cat. 2, PBT, vPvB

19	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	295-275-9	ND	0.1	Carcinogen, cat. 2; Mutagen, cat. 2, PBT, vPvB
20	Anthracene oil, anthracene-low	90640-82-7	292-604-8	ND	0.1	Carcinogen, cat. 2; Mutagen, cat. 2, PBT, vPvB
21	Anthracene oil, anthracene paste	90640-81-6	292-603-2	ND	0.1	Carcinogen, cat. 2; Mutagen, cat. 2, PBT, vPvB
22	Diisobutyl phthalate	84-69-5	201-553-2	ND	0.005	Toxic for reproduction, cat. 2
23	Aluminosilicate, Refractory Ceramic Fibres* <sup>a</sup>	Index no. 650-017-00-8		ND	0.01	Carcinogen, cat. 2
24	Zirconia Aluminosilicate, Refractory Ceramic Fibres* <sup>b</sup>	Index no. 650-017-00-8		ND	0.01	Carcinogen, cat. 2
25	Lead chromate*	7758-97-6	231-846-0	ND	0.01	Carcinogen, cat. 2; Toxic for reproduction, cat. 1
26	Lead chromate molybdate sulfate red (C.I. Pigment Red 104)*	12656-85-8	235-759-9	ND	0.01	Carcinogen, cat. 2; Toxic for reproduction, cat. 1
27	Lead sulfochromate yellow (C.I. Pigment Yellow 34)*	1344-37-2	215-693-7	ND	0.01	Carcinogen, cat. 2; Toxic for reproduction, cat. 1
28	Tris(2-chloroethyl) phosphate	115-96-8	204-118-5	ND	0.005	Toxic for reproduction, cat. 2
29	Coal tar pitch, high temperature	65996-93-2	266-028-2	ND	0.1	Carcinogen, cat. 2, PBT, vPvB
30	Acrylamide	79-06-1	201-173-7	ND	0.005	Carcinogen, cat. 2; Mutagen, cat. 2
31	Trichloroethylene	79-01-6	201-167-4	ND	0.005	Carcinogen, cat. 2
32	Boric acid*	10043-35-3, 11113-50-1	233-139-2 / 234-343-4	ND	0.01	Toxic for reproduction, cat. 2
33	Disodium tetraborate, anhydrous*	1330-43-3 <sup>(5)</sup> , 12179-04-3 <sup>(6)</sup> , 1303-96-4 <sup>(7)</sup>	215-540-4	ND	0.01	Toxic for reproduction, cat. 2
34	Tetraboron disodium heptaoxide, hydrate*	12267-73-1	235-541-3	ND	0.01	Toxic for reproduction, cat. 2
35	Sodium chromate*	7775-11-3	231-889-5	ND	0.01	Carcinogen, cat. 2; Mutagen, cat. 2; Toxic for reproduction, cat. 2
36	Potassium chromate*	7789-00-6	232-140-5	ND	0.01	Carcinogen, cat. 2; Mutagen, cat. 2
37	Ammonium dichromate*	7789-09-5	232-143-1	ND	0.01	Carcinogen, cat. 2; Mutagen, cat. 2; Toxic for reproduction, cat. 2



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38	Potassium dichromate*	7778-50-9	231-906-6	ND	0.01	Carcinogen, cat. 2; Mutagen, cat. 2; Toxic for reproduction, cat. 2
39	Cobalt(II) sulphate*	10124-43-3	233-334-2	ND	0.01	Carcinogen, cat. 2; Toxic for reproduction, cat. 2
40	Cobalt(II) dinitrate*	10141-05-6	233-402-1	ND	0.01	Carcinogen, cat. 2; Toxic for reproduction, cat. 2
41	Cobalt(II) carbonate*	513-79-1	208-169-4	ND	0.01	Carcinogen, cat. 2; Toxic for reproduction, cat. 2
42	Cobalt(II) diacetate*	71-48-7	200-755-8	ND	0.01	Carcinogen, cat. 2; Toxic for reproduction, cat. 2
43	2-Methoxyethanol	109-86-4	203-713-7	ND	0.005	Toxic for reproduction, cat. 2
44	2-Ethoxyethanol	110-80-5	203-804-1	ND	0.005	Toxic for reproduction, cat. 2
45	Chromium trioxide*	1333-82-0	215-607-8	ND	0.01	Carcinogen, cat. 1; Mutagen, cat. 2
46	Acid generated from chromium trioxide and their oligomers: Chromic acid* Dichromic acid* Oligomers of chromic acid and dichromic acid*	7738-94-5 13530-68-2 -	231-801-5 236-881-5 -	ND	0.01	Carcinogen, cat. 2
47	2-Ethoxyethyl acetate	111-15-9	203-839-2	ND	0.005	Toxic for reproduction, cat. 2
48	Strontium Chromate*	7789-06-2	232-142-6	ND	0.01	Carcinogen, cat. 2
49	1,2-benzenedicarboxylic acid, di-C7-11 branched alkyl ester and linear alkyl ester	68515-42-4	271-084-6	ND	0.005	Toxic for reproduction, cat. 2
50	Hydrazine	302-01-2 7803-57-8	206-114-9	ND	0.005	Carcinogen, cat. 2
51	1-Methyl-2-pyrrolidone	872-50-4	212-828-1	ND	0.005	Toxic for reproduction, cat. 2
52	1,2,3-trichloropropane	96-18-4	202-486-1	ND	0.005	Toxic for reproduction, cat. 2
53	1,2-benzenedicarboxylic acid, di-C6-8-branched alkyl ester, C7-rich (DIHP)	71888-89-6	276-158-1	ND	0.005	Toxic for reproduction, cat. 2
54	Dichromium tris(chromate)*	24613-89-6	246-356-2	ND	0.01	Carcinogen, cat. 2



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55	Potassium hydroxyoctaoxidizincated i-chromate*	11103-86-9	234-329-8	ND	0.01	Carcinogen, cat. 1
56	Pentazinc chromate octahydroxide*	49663-84-5	256-418-0	ND	0.01	Carcinogen, cat. 1
57	Formaldehyde, oligomeric reaction products with aniline (technical MDA)	25214-70-4	500-036-1	ND	0.005	Carcinogen, cat. 2
58	Bis(2-methoxyethyl) phthalate	117-82-8	204-212-6	ND	0.005	Toxic for reproduction, cat. 2
59	2-Methoxyaniline; o-Anisidine	90-04-0	201-963-1	ND	0.005	Carcinogen, cat. 2
60	4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol)	140-66-9	205-426-2	ND	0.005	Equivalent level of concern
61	1,2-Dichloroethane	107-06-2	203-458-1	ND	0.005	Carcinogen, cat. 2
62	Bis(2-methoxyethyl) ether	111-96-6	203-924-4	ND	0.005	Toxic for reproduction, cat. 2
63	Arsenic acid*	7778-39-4	231-901-9	ND	0.1	Carcinogen, cat. 1
64	Calcium arsenate*	7778-44-1	231-904-5	ND	0.01	Carcinogen, cat. 1
65	Trilead diarsenate*	3687-31-8	222-979-5	ND	0.01	Carcinogen, cat. 1; Toxic for reproduction, cat. 1
66	N,N-dimethylacetamide (DMAC)	127-19-5	204-826-4	ND	0.005	Toxic for reproduction, cat. 2
67	2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4	202-918-9	ND	0.005	Carcinogen, cat. 2
68	Phenolphthalein	77-09-8	201-004-7	ND	0.005	Carcinogen, cat. 2
69	Lead azide, Lead diazide*	13424-46-9	236-542-1	ND	0.01	Toxic for reproduction, cat. 1
70	Lead styphnate*	15245-44-0	239-290-0	ND	0.01	Toxic for reproduction, cat. 1
71	Lead dipicrate*	6477-64-1	229-335-2	ND	0.01	Toxic for reproduction, cat. 1
72	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	203-977-3	ND	0.005	Toxic for reproduction, cat. 2
73	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	203-794-9	ND	0.005	Toxic for reproduction, cat. 2
74	Diboron trioxide*	1303-86-2	215-125-8	ND	0.01	Toxic for reproduction, cat. 2
75	Formamide	75-12-7	200-842-0	ND	0.005	Toxic for reproduction, cat. 2
76	Lead(II) bis(methanesulfonate)*	17570-76-2	401-750-5	ND	0.01	Toxic for reproduction, cat. 1
77	TGIC (1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione) §	2451-62-9	219-514-3	ND	0.005	Mutagen, cat. 2

78	$\beta$ -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	423-400-0	ND	0.005	Mutagen, cat. 2
79	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	202-027-5	ND	0.005	Carcinogen, cat. 2
80	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	202-959-2	ND	0.005	Carcinogen, cat. 2
81	[4-[4,4'-bis(dimethylamino)benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3)	548-62-9	208-953-6	ND	0.005	Carcinogen, cat. 2
82	[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	219-943-6	ND	0.1	Carcinogen, cat. 2
83	$\alpha,\alpha$ -Bis[4-(dimethylamino)phenyl]-4-(phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4)	6786-83-0	229-851-8	ND	0.1	Carcinogen, cat. 2
84	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol	561-41-1	209-218-2	ND	0.005	Carcinogen, cat. 2

(1) CAS no. 7789-12-0 refers to sodium dichromate dihydrate

(2) CAS no. 10588-01-9 refers to anhydrous sodium dichromate

(3) CAS no. 3194-55-6 refers to a specific HBCDD - 1,2,5,6,9,10-hexabromocyclododecane

(4) CAS no. 25637-99-4 refers to unspecific HBCDD isomer composition

(5) CAS no. 1330-43-3 refers to disodium tetraborate, anhydrous

(6) CAS no. 12179-04-3 refers to sodium tetraborate, pentahydrate

(7) CAS no. 1303-96-4 refers to sodium tetraborate, decahydrate





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Method: Analysis is based on GC, LC, IC, ICP, with various detection techniques and UV.

Remark:

1. PBT = Persistent, bio accumulative and toxic as defined in Regulation (EC) No 1907/2006
2. vPvB = Very persistent and very bio accumulative as defined in Regulation (EC) No 1907/2006
3. ND = Not Detected
4. \*Result is based on the heavy metal or inorganic element concentration. Due to the limit of the analytical technology available, any further investigation is not feasible. The client is strongly advised to review the chemical formulation to ascertain.
5. \*\*Result is identified by tributyltin (TBT). Due to the limit of the analytical technology available, any further investigation is not feasible. The client is strongly advised to review the chemical formulation to ascertain.
6. <sup>§</sup>TGIC (1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione) and  $\beta$ -TGIC (1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione) are reported as a mixture.
7. <sup>a</sup>Refer to Aluminosilicate, Refractory Ceramic Fibres fulfil the three following conditions: a) oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres ( $\mu\text{m}$ ) c) alkaline oxide and alkali earth oxide ( $\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{CaO}+\text{MgO}+\text{BaO}$ ) content less or equal to 18% by weight.
8. <sup>b</sup>Refer to Zirconia Aluminosilicate, Refractory Ceramic Fibres fulfil the three following conditions: a) oxides of aluminium, silicon and zirconium are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres ( $\mu\text{m}$ ). c) alkaline oxide and alkali earth oxide ( $\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{CaO}+\text{MgO}+\text{BaO}$ ) content less or equal to 18% by weight.



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Note:

1. The limit of 0.1% (w/w) applies to an article. The results were calculated assuming as the submitted sample was an article. However, the results may not be applicable if the intended use of the sample is a substance or mixture. According to REACH, definition of an article, substance and mixture are:
  - i. Article - An object during production is given a special shape, surface or design which determines its function to a greater degree than does its chemical composition
  - ii. Substance - A chemical element and its compound in the natural state or obtained by any manufacturing process
  - iii. Mixture (Previously known as "Preparation") - A mixture or solution composed of two or more substances
2. In accordance of Article 7 of Regulation (EC) No. 1907/2006 (REACH regulation) – Registration and notification of substances in articles, any producer or importer of articles shall notify ECHA, if a substance meets in criteria in Article 57 and is identified in accordance with Article 59(1), if both (1) the substance is present in those articles in quantities totalling over 1 tonne per producer or importer per year & (2) the substance is present in those articles above a concentration of 0.1% weight by weight (w/w) are met. The information to be notified shall include (a) identity and contact details of the producer or importer, (b) the registration numbers, (c) the identity of the substance and (d) the classification of the substance, (e) a brief description of the use of the substance and (f) the tonnage range of the substance.
3. In accordance of Article 33 of Regulation (EC) No. 1907/2006 (REACH regulation) – Duty to communicate information on substances in articles, any supplier of an article containing a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in concentration above 0.1% weight by weight (w/w) shall provide the recipient of the article with sufficient information, available to the supplier, to allow safe use of the article including, as a minimum, the name of that substance. On request by a consumer the relevant information shall be provided by any supplier of an article free of charge, within 45 days of receipt of the request.

END