

TEST REPORT

Reference No. : TRHZ1105027

Date : May. 03, 2011

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Applicant : SUZHOU AKCOME PHOTOVOLTAIC NEW MATERIAL CO., LTD
Address : ZHENBEI WEST ROAD, ECONOMIC DEVELOPMENT ZONE, ZHANGJIAGANG, JIANGSU, CHINA

The following merchandise was (were) submitted and identified by the client as:

Name Of Product : EVA FILM FOR ENCAPSULATING SOLAR CELL

Test Model : AKC-1F

Model May Cover : /

Main Material: Ethylene-Vinylacetate copolymer

Sample Received : Apr. 22, 2011

Test Period : Apr. 22, 2011 - Apr. 29, 2011

Test Request : 1、 According to European Commission Regulation 1907/2006 (REACH Act), to test the SVHC content which have been listed in ECHA's SVHC candidate list till 18 Jun. 2010.

http://echa.europa.eu/chem_data/candidate_list_table_en.asp

2、 According to the official press released in Aug.30, 2010, to test the potential SVHC candidate substances.

http://echa.europa.eu/doc/press/pr_10_16_svhc_consultation_20100830.pdf

Test Method : In-house method with reference to US EPA:8270D, 3052, 6010C, 3550C and EN14362, , DIN EN ISO 17353, IEC 62321, ZEK01.2-08, EN 14582.

Conclusion : According to the analyzed result on submitted samples, the contents of mentioned test items **are less than 0.1%**.

Issued by:



TÜV NORD
GPSC Manager

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TEST RESULTS:

Test Item(s)	CAS No.	MDL (%)	Test Result(s) (%)	Classification
Triethyl arsenate*	15606-95-8	0.01	N.D.	CMR 1&2
Anthracene	120-12-7	0.005	N.D.	PBT
4,4'- Diaminodiphenylmethane	101-77-9	0.005	N.D.	CMR: C2
Dibutyl Phthalate (DBP)	84-74-2	0.002	N.D.	CMR 1&2
Cobalt dichloride*	7646-79-9	0.01	N.D.	CMR 1&2
Diarsenic pentaoxide*	1303-28-2	0.01	N.D.	CMR 1&2
Diarsenic trioxide*	1327-53-3	0.01	N.D.	CMR 1&2
Sodium dichromate*	7789-12-0	0.01	N.D.	CMR 1&2
5-tert-butyl-2,4,6-trinitro-m-xylene	81-15-2	0.005	N.D.	vPvB
Di(2-ethyl(hexyl)phthalate)	117-81-7	0.005	N.D.	CMR 1&2
Hexabromocyclododecane	25637-99-4	0.002	N.D.	PBT
Alkanes, C10-13, chloro	85535-84-8	0.005	N.D.	PBT
Bis(tributyltin)oxide**	56-35-9	0.005	N.D.	PBT
Lead hydrogen arsenate*	7784-40-9	0.01	N.D.	CMR 1&2
Benzyl butyl phthalate	85-68-7	0.005	N.D.	CMR 1&2

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Test Item(s)	CAS No.	MDL (%)	Test Result(s) (%)	Classification
Anthracene oil	90640-80-5	0.01	N.D.	PBT & vPvB, CMR: C2
Anthracene oil, anthracene paste; distn. Lights	91995-17-4	0.01	N.D.	PBT & vPvB, CMR: C2, M2
Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	0.01	N.D.	PBT & vPvB, CMR: C2, M2
Anthracene oil, anthracene-low	90640-82-7	0.01	N.D.	PBT & vPvB, CMR: C2, M2
Anthracene oil, anthracene paste	90640-81-6	0.01	N.D.	PBT & vPvB, CMR: C2, M2
Coal tar pitch, high temperature	65996-93-2	0.01	N.D.	PBT & vPvB, CMR: C2
Aluminosilicate, Refractory Ceramic Fibres***	---	0.01	N.D.	CMR: C2
Zirconia Aluminosilicate, Refractory Ceramic Fibres***	---	0.01	N.D.	CMR: C2
2,4-Dinitrotoluene	121-14-2	0.01	N.D.	CMR: C2
Diisobutyl phthalate	84-69-5	0.01	N.D.	CMR: R2
Lead chromate*	7758-97-6	0.01	N.D.	CMR: C2,R1
Lead chromate molybdate sulfate red (C.I. Pigment Red 104)*	12656-85-8	0.01	N.D.	CMR: C2,R1
Lead sulfochromate yellow (C.I. Pigment Yellow 34)*	1344-37-2	0.01	N.D.	CMR: C2,R1
Tris(2-chloroethyl)phosphate	115-96-8	0.01	N.D.	CMR: R2
Acrylamide	79-06-1	0.01	N.D.	CMR: C2, M2

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Test Item(s)	CAS No.	MDL (%)	Test Result(s) (%)	Classification
Boric acid*	10043-35-3	0.01	N.D.	CMR: R2
Disodium tetraborate, anhydrous*	1330-43-4	0.01	N.D.	CMR: R2
Tetraboron disodium heptaoxide, hydrate*	12267-73-1	0.01	N.D.	CMR: R2
Sodium chromate*	7775-11-3	0.01	N.D.	CMR2
Potassium chromate*	7789-00-6	0.01	N.D.	CMR: C2,M2
Ammonium dichromate*	7789-09-5	0.01	N.D.	CMR2
Potassium dichromate*	7778-50-9	0.01	N.D.	CMR2
Trichloroethylene	79-01-6	0.01	N.D.	CMR: C2

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Test Item(s)	CAS No.	MDL (%)	Test Result(s) (%)	Classification
1,2,3-Trichlorobenzene	87-61-6	0.005	N.D.	PBT
1,2,4-Trichlorobenzene	120-82-1	0.005	N.D.	PBT
1,3,5-Trichlorobenzene	108-70-3	0.005	N.D.	PBT
Cobalt(II) sulphate*	10124-43-3	0.01	N.D.	CMR
Cobalt(II) dinitrate*	10141-05-6	0.01	N.D.	CMR
Cobalt(II) carbonate*	513-79-1	0.01	N.D.	CMR
Cobalt(II) diacetate*	71-48-7	0.01	N.D.	CMR
2-Methoxyethanol	109-86-4	0.005	N.D.	CMR
2-Ethoxyethanol	110-80-5	0.005	N.D.	CMR
Chromium trioxide*	1333-82-0	0.01	N.D.	CMR
Acids generated from chromium trioxide and their oligomers: Chromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid*	---	0.01	N.D.	CMR

Test Part Description: White EVA film

***** To be continued *****

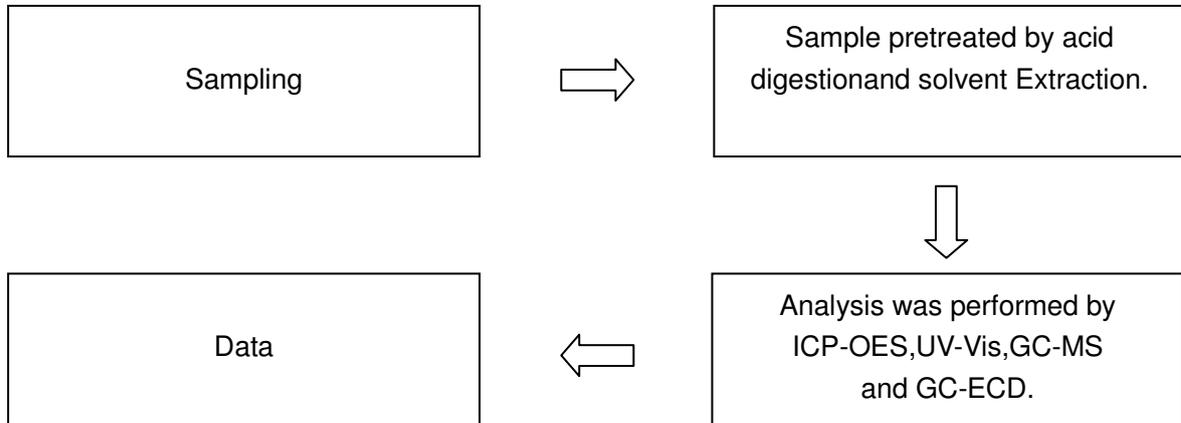
FLOW CHART

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- Remark 1**
- 1) Definition of classification is listed in Appendix A of this report in accordance with 67/548/EEC and Regulation(EC) No. 1907/2006.
 - 2) In accordance with Regulation(EC) No. 1907/2006, any producer or importer of articles shall notify ECHA, in accordance with paragraph 4 of Article 7, if a substance meets the criteria in Article 57 and is identified in accordance with Article 59(1), if both the following conditions are met:
 - (a) the substance is present in those articles in quantities totalling over 1 tonne per producer or importer per year;
 - (b) the substance is present in those articles above a concentration of 0,1 % weight by weight (w/w).
 - 3) From 28 October 2008, EU & EEA suppliers of articles which contain substances on the Candidate List in a concentration above 0.1% (w/w) must provide sufficient information, available to them, to their customers and on request to a consumer within 45 days of the receipt of this request. This information must ensure safe use of the article and, as a minimum, include the name of the substance.
- Remark 2**
- 1)* Calculated concentration of cobalt dichloride, cobalt(II) sulphate, cobalt(II) dinitrate, cobalt(II) carbonate and cobalt(II) diacetate is based on the identified heavy metal and anion result. Calculated concentration of diarsenic pentoxide, chromium trioxide, sodium dichromate, dehydrate, lead hydrogen arsenate, triethyl arsenate, lead chromate, sodium chromate, potassium chromate ammonium dichromate, potassium dichromate lead chromate molybdate sulfated and lead sulfochromate yellow and acids generated from chromium trioxide and their oligomers: are based on the identified heavy metal result, boric acid, disodium tetraborate, anhydrous and tetraboron disodium heptaoxide hydrate are based on the identified result of boron and sodium result. Identity of above metal substances present in the article have to be further confirmed.
 - 2)** Concentration of bis(tributyltin)oxide, TBTO is reported as tributyltin, TBT. The result is a screening test of TBTO and can cover TBTO and other salts under current technologies.
Further investigation is needed to have the exact amount of TBTO.
 - 3)*** Calculated concentration of Aluminosilicate, Refractory Ceramic Fibres and Zirconia Aluminosilicate, Refractory Ceramic Fibres is based on the identified heavy metal result and confirmation by microscope.
 - 4) Not detected, less than method detection limit(MDL).

***** To be continued *****

SAMPLE PHOTO



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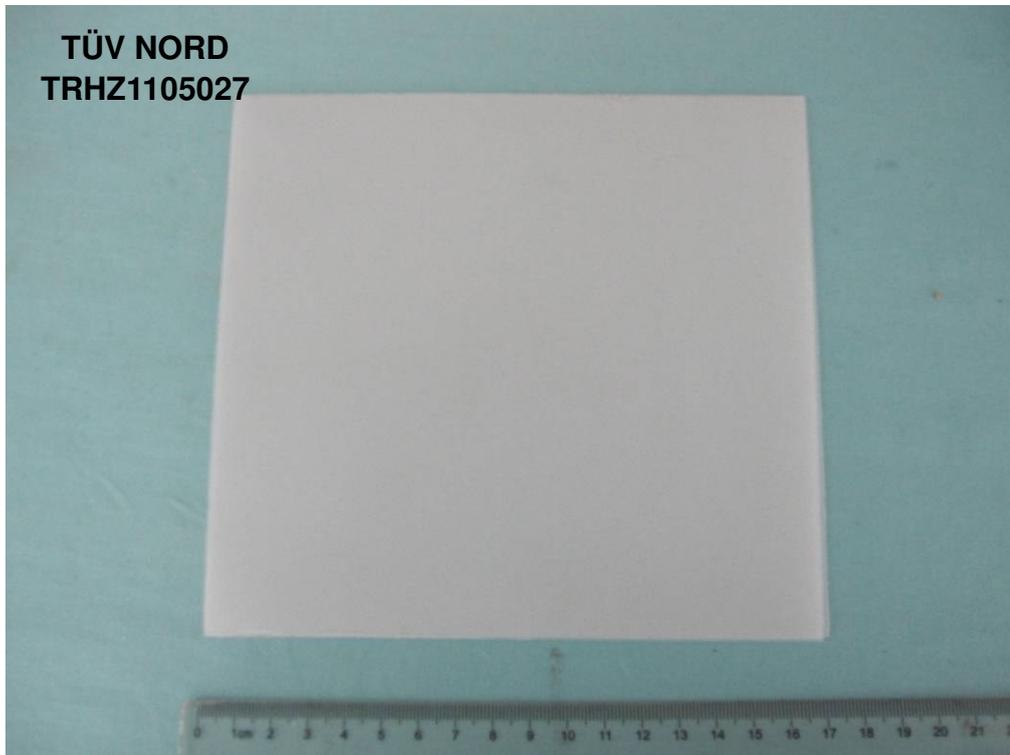
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Appendix A:

Classification	Definition under 67/548/EEC and Regulation (EC) No 1907/2006
Carcinogen category 1:	Substances known to be carcinogenic to man. There is sufficient evidence to establish a causal association between human exposure to a substance and the development of cancer.
Carcinogen category 2:	Substances which should be regarded as if they are carcinogenic to man. There is sufficient evidence to provide a strong presumption that human exposure to a substance may result in the development of cancer. Generally on the basis of: -appropriate long-term animal studies -other relevant information.
Mutagen category 1:	Substances known to be mutagenic to man.. There is sufficient evidence to establish a causal association between human exposure to a substance and heritable genetic damage.
Mutagen category 2:	Substances which should be regarded as if they are mutagenic to man .There is sufficient evidence to provided a strong presumption that human exposure to the substance may result in the development of heritable genetic damage, generally on the basis of : -appropriate animal studies, -other relevant information.
Toxic to Reproduction category 1:	Substances known to impair fertility in humans. There is sufficient evidence to establish a causal relationship between human exposure to the substance and impaired fertility. Substances known to cause developmental toxicity in humans. There is sufficient evidence to establish a causal relationship between human exposure to the substance and subsequent developmental toxic effects in the progeny. Substances which should be regarded as if they impair fertility in humans. There is sufficient evidence to provide a strong presumption that human exposure to the substance may result in impaired fertility on the basis of : -clear evidence in animal studies of impaired fertility in the absence of toxic effects, or, evidence of impaired fertility occurring at around the same dose levels as other toxic effects but which is not a secondary nonspecific consequence of the other toxic effects, -other relevant information.
Toxic to Reproduction category 2:	Substances which should be regarded as if they cause developmental toxicity to humans. There is sufficient evidence to provide a strong presumption that human exposure to the substance may result in developmental toxicity, generally on the basis of: -clear results in appropriate animal studies where effects have been observed in the absence of signs of marked material toxicity, or at around the same dose levels as other toxic effects but which are not a secondary non-specific consequence of the other toxic effects, --other relevant information.
PBT & vPvB	Substances which are persistent, bioaccumulative and toxic (PBT) or very persistent and verybioaccumulative (vPvB) pose a particular challenge to the chemicals safety management. For these Substances a "safe" concentration in the environment cannot be established with sufficient reliability.
CMR	Carcinogen, Mutagen, Reprotoxic.

***** END OF REPORT *****