

## TEST REPORT

**Report No. : CH:TX:9420011885**

**DATE : 16/03/2009**

**ITC LIMIED, PSPD**  
UNIT : BCK, SARAPAKA  
KHAMMAM  
507 128.  
INDIA.

The following sample was submitted and identified by/on behalf of the client as: BOARD

SGS Job No. : 942105521  
Product Name : BOARD  
Buyer : --  
Country of Origin : INDIA  
Country of Destination : GERMANY, SWEDEN, DENMARK, NORWAY, ITALY  
Sample Receiving Date : February 27, 2009  
Testing Period : February 27, 2009 to March 14, 2009  
Test Sample : SBS BOARDS  
Substance/Article : PEARL GRAPHIK, SAFIRE GRAPHIK, ART MAESTRO, CARTE PERSONA, TRIPLEX, BOARDS, LIQUID PACKAING BOARDS  
End use/Category : Packaging  
Test Requested : Semi-quantitative testing of fifteen (15) substances in the Candidate List of Substances of Very High Concern (SVHC) for authorization published by European Chemicals Agency (ECHA) on October 28, 2008 regarding Regulation (EC) No 1907/2006 concerning the REACH, with consideration of the latest amendment of 67/548/EEC (31<sup>th</sup> Adapatation to Technical progress) on December 16, 2008.

Test result : Please refer to next page(s).

Test Summary : According to the specified scope and analytical techniques, concentrations of all 15 SVHC are < 0.1% (w/w) in the submitted sample.

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- Note :
- (A) If a SVHC is found over the reporting limit, client is suggested to identify the component which contains the SVHC and the exact concentration of the SVHC by requesting further quantitative analysis and/or investigation from the laboratory. (for organic substance)
  - (B) Please notice that the identified SVHC substance(s) is based on the calculation from the result of selected ions. The concentration that identified is based on the worst case scenario. Further investigation is required for confirmation of the presence of SVHC substance(s).
  - (C) Client may have legal obligations resulting from the inclusion of SVHC in the product. These obligations are linked to the listed SVHC on their own, in preparations and in articles. Please see **Appendix B** for detail.

Per pro SGS India Private Ltd.

**Anitha.J**  
Lab Manager  
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Test Sample:

Sample Description: BOARD

Sample Photo

Report No. 9420011885



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**Test Results:**

Test method: SGS in-house method (extraction by organic solvent, analysis by GC-MS and GC-ECD)

Substance Name	CAS number	EC number	Amount of substance	Reporting Limit (%)	Classification <sup>2</sup>
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	287-476-5	ND	0.005	PBT
Anthracene	120-12-7	204-371-1	ND	0.005	PBT
Benzyl butyl phthalate (BBP)	85-68-7	201-622-7	ND	0.005	Toxic to Reproduction Category 2
Bis (2-ethyl(hexyl)phthalate) (DEHP)	117-81-7	204-211-0	ND	0.005	Toxic to Reproduction Category 2
4,4'-Diaminodiphenylmethane	101-77-9	202-974-4	ND	0.005	Carcinogen Category 2
Dibutyl phthalate (DBP)	84-74-2	201-557-4	ND	0.005	Toxic to Reproduction Category 2
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α – HBCDD, β-HBCDD, γ-HBCDD)	25637-99-4 and 3194- 55-6 (134237-51-7, 134237-50-6, 134237-52-8)	247-148-4 and 221-695-9	ND	0.005	PBT
5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	201-329-4	ND	0.005	vPvB

Test method: SGS in-house method (Acid digestion, analysis by ICP-OES and/or ICP-MS)

Substance Name	CAS number	EC number	Amount of ion (% w/w)	Calculated amount of substance (% w/w)	Reporting Limit (%)**	Classification <sup>2</sup>
Bis(tributyltin)oxide* (TBTO)	56-35-9	200-268-0	Sn: ND	ND See note 1	0.005	PBT
Cobalt dichloride* (CoCl <sub>2</sub> )	7646-79-9	231-589-4	Co: ND Cl: ND	ND See note 1	0.005	Carcinogen Category 2
Diarsenic pentaoxide* (As <sub>2</sub> O <sub>5</sub> )	1303-28-2	215-116-9	As: ND	ND See note 1	0.005	Carcinogen Category 1
Diarsenic trioxide* (As <sub>2</sub> O <sub>3</sub> )	1327-53-3	215-481-4	As: ND	ND See note 1	0.005	Carcinogen Category 1
Lead hydrogen	7784-40-9	232-064-2	Pb: ND	ND	0.005	Carcinogen

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arsenate* (PbHAsO <sub>4</sub> )			As: ND	See note 1		Category 1; Toxic to Reproduction Category 1
Sodium dichromate** (Na <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> )	10588-01-9	234-190-3	Na: 0.035% Cr(VI): ND	ND See note 1	0.005	Carcinogen Category 2; Mutagen Category 2; Toxic to Reproduction Category 2
Triethyl arsenate* (AsO(C <sub>2</sub> H <sub>5</sub> O) <sub>3</sub> )	15606-95-8	427-700-2	As: ND	ND See note 1	0.005	Carcinogen Category 1

**Notes:**

- By test result of corresponding ion(s), the presence of this substance with concentration more than 0.1% can be excluded.
- The test result is confirmed by TLC chromatogram (please refer to remark 5).

**Remarks:**

- The chemical analysis of 15 SVHC candidates for authorization published by ECHA on October 28, 2008 ([http://echa.europa.eu/chem\\_data/candidate\\_list\\_table\\_en.asp](http://echa.europa.eu/chem_data/candidate_list_table_en.asp)) is performed by SGS in-house test methods. The candidate list of SVHC for authorization is under evaluation by ECHA and may subject to further change in the future.
- Definition of classification is listed in **Appendix A** of this report in accordance with 67/548/EEC and Regulation (EC) No 1907/2006.
- \* = Test result is calculated as per selected ion(s) including cobalt, sodium, lead, arsenic, chloride, dichromate and arsenate. Further confirmation and quantitation techniques including IC chromatography, UV-Vis spectrometry and TLC chromatography would be adopted whenever a positive result is found over the reporting limit.
- # = The Cr concentration is based on Cr(VI) measurement. The test result is reported as sodium dichromate (CAS number 10588-01-9). Please note that sodium dichromate dihydrate (CAS number 7789-12-0) is no longer classified as SVHC according to the latest amendment of 67/548/EEC (31<sup>th</sup> Adaption to Technical progress) on December 16, 2008.
- ND = denoted as below the corresponding reporting limit.
- 0.1% (w/w) = 1,000 ppm = 1,000 mg/kg
- \*\* = The reporting limit presented is based on the concentration of corresponding ions determined by testing. Concentration as per compound is calculated from the test result as per selected ion.
- All reporting limit is based on homogeneous material analysis.

**Abbreviations:**

OES: Optical Emission Spectroscopy; ECD: Electron Capture Detector; GC: Gas Chromatography; IC: Ion Chromatography; ICP: Inductively Coupled Argon Plasma; MS: Mass Spectrometry; TLC: Thin Layer Chromatography

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**Appendix A**

**Classification Definition under 67/548/EEC and Regulation (EC) No 1907/2006**

Carcinogen Category 1:	<u>Substances known to be carcinogenic to man.</u> There is sufficient evidence to establish a causal association between human exposure to a substance and the development of cancer.
Carcinogen Category 2:	<u>Substances which should be regarded as if they are carcinogenic to man.</u> 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:	<u>Substances known to be mutagenic to man.</u> There is sufficient evidence to establish a causal association between human exposure to a substance and heritable genetic damage.
Mutagen Category 2:	<u>Substances which should be regarded as if they are mutagenic to man.</u> There is sufficient evidence to provide 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:	<u>Substances known to impair fertility in humans.</u> There is sufficient evidence to establish a causal relationship between human exposure to the substance and impaired fertility. <u>Substances known to cause developmental toxicity in humans.</u> There is sufficient evidence to establish a causal relationship between human exposure to the substance and subsequent developmental toxic effects in the progeny.
Toxic to Reproduction Category 2:	<u>Substances which should be regarded as if they impair fertility in humans.</u> 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. <u>Substances which should be regarded as if they cause developmental toxicity to humans.</u> 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 maternal 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 very bioaccumulative (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.

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**Appendix B****Obligations: Articles**

- 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) of the Regulation, if (a) the substance is present in those articles in quantities totaling over one tonne per producer or importer per year; and (b) the substance is present in those articles above a concentration of **0.1%** weight by weight (w/w).
- Article 33 of Regulation (EC) No 1907/2006 requires supplier of an article containing a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in a 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.
- Authorization may be required if it contains SVHC listed in Annex XIV of the Regulation.

**Obligations: Packaging Materials and Containers**

- Packaging materials may be produced or imported separately as packaging of imported goods. "Guidance for Articles" published by ECHA (May 2008) revealed that the packaging material or container is always a separate 'article' and to be assessed separately from any object it contains. The obligations for articles also apply to packaging materials.

**Obligations: Preparations**

- For preparation that is intended to be used in the manufacture of article and will be imported into EU in the form of an article, the obligations for articles will be applied.
- For preparation that is directly imported into EU, Article 31 of Regulation (EC) No 1907/2006 requires supplier of a preparation to provide a safety data sheet to the recipients at their request if the preparation contains at least one of the 15 SVHC and its individual concentration is at least **0.1%** weight by weight (w/w) for non gaseous preparations and at least **0.2%** by volume for gaseous preparations.
- Authorization may be required if it contains SVHC listed in Annex XIV of the Regulation. However, authorization is not required if the SVHC meets one of the following criteria: **a)** for substances referred to in Article 57 (d), (e), (f), below a concentration limit of **0.1%** weight by weight (w/w); **b)** for all other substances, below the lowest of the concentration limits specified in Directive 1999/45/EC or in Annex I to Directive 67/548/EEC which result in the classification of the preparation as dangerous.

**Obligations: Substances**

- For substance that is intended to be used in the manufacture of article and will be imported into EU in the form of an article, the obligations for articles will be applied.
- For substance that is directly imported into EU, Article 31 of Regulation (EC) No 1907/2006 requires supplier of a SVHC to provide a safety data sheet to their customers.
- Authorization may be required if the substance is included in Annex XIV of the Regulation.

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