TEST REPORT: 7191106388-02A-CHM15-CSY-CR1

Date: 12 MAR 2015 Tel: +65 68851312 Fax: +65 67784301

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SUBJECT

Determination of volatile organic compound (VOC) and Prohibited Substances for Paint Sample

CLIENT

Asian Paints Nepal Pvt Ltd
P.O.Box 37
Hetauda Industrial District
Hetauda
Nepal

Attn : Om Nath Sinha

DESCRIPTION OF SAMPLE

One sample labeled as follows was received on 09 Feb 2015.

Product Name	Shade	Quantity
Royale Luxury Emulsion	RB1	1 Ltr

DATE OF TEST

11 Feb 2015 – 12 Mar 2015

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METHOD OF TEST

Sample was tested for the following tests.

	Test	Method
1)	Volatile organic compound content	By BS EN ISO 11890-2:2013, Paints and varnishes – *Determination of volatile organic compound (VOC) content – Part 2 : Gas-chromatographic method*.
2)	Mercury, Lead, Cadmium and Chromium	The sample was digested in inorganic acid, followed by analysis using Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES).
3)	Phthalates	By Gas Chromatograph – Mass Spectrometry (GC-MS).
4)	Formaldehyde	The sample was analysed by UV-Vis Spectrophotometer using Acetylacetone as reagent.
4)	Triphenyl tins and tributyl tins	By Gas Chromatograph –Mass Spectrometry (GC-MS).
5)	1,2-dichlorobenzene	By Gas Chromatography Mass Spectrometry (GC-MS).
7)	Alkyl Phenol Ethoxylates	BS3762 : 1990 Analysis of formulated Detergent

SUMMARY OF TEST RESULTS

The summary of test results for "Royale Luxury Emulsion".

Item No.	Test	Result	Method Detection Limit	GS 11 Criteria	Inferred Remark
1	Formaldehyde Content	36 ppm	10 ppm	< 100 ppm	Pass
2	Heavy Metals: Mercury, Lead, Cadmium, Chromium	Not Detected	1 ppm	Not Detected	Pass
3	VOC Content	39.1 g/L	2 g/L	< 100 g/L*	Pass
4	1,2-dichlorobenzene	Not Detected	10 ppm	Not Detected	Pass
5	Phthalates	Not Detected	10 ppm	Not Detected	Pass
6	Triphenyl tins and tributyl tins	Not Detected	10 ppm	Not Detected	Pass
7	Alkyl Phenol Ethoxylates	Not Detected	10 ppm	Not Detected	Pass

* For Flat Top Coat VOC < 50g/L & Non-Flat Top Coat VOC <100g/L

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RESULTS *(Cont'd)*

Table 1 : The Formaldehyde results for "Royale Luxury Emulsion".

Test	Result	Method Detection Limit
Formaldehyde Content	36 ppm	10 ppm

Table 2 : The Elemental results for "Royale Luxury Emulsion"

Test	Result	Method Detection Limit
Mercury	Not Detected	1 ppm
Lead	Not Detected	1 ppm
Cadmium	Not Detected	1 ppm
Chromium	Not Detected	1 ppm

Table 3 : The Volatile Organic Compound (VOC) content for "Royale Luxury Emulsion".

Test	Result	Method Detection Limit
VOC Content [a]	39.1 g/L [b]	2 g/L

a) Volatile organic compound (VOC) means any organic compound having an initial boiling point less than or equal to 250°C measured at a standard pressure of 101,3kPa.
b) The result was calculated based on the specific gravity = 1.42 provided by the client

Table 4 : The analytical results for "Royale Luxury Emulsion".

Test	Result	Method Detection Limit
1,2-dichlorobenzene	Not Detected	10 ppm
Phthalates	Not Detected	10 ppm
Triphenyl tins and tributyl tins	Not Detected	10 ppm
Alkyl Phenol Ethoxylates	Not Detected	10 ppm

MS CHOO SEOW YAH
TECHNICAL EXECUTIVE

DR XIAO ZHOU
PRODUCT MANAGER
MICROCONTAMINATION DIAGNOSIS
CHEMICAL & MATERIALS

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