

## TEST REPORT: 7191087533-CHM14-01A-CCK\_CR2

Date: 16 JUN 2014

Tel: +65 68851321 Fax: +65 67784301

Client's Ref:

Email: tai-hoe.lin@tuv-sud-psb.sg

**Note:** This report is issued subject to the Testing and Certification Regulations of the TÜV SÜD Group and the General Terms and Conditions of Business of TÜV SÜD PSB Pte Ltd. In addition, this report is governed by the terms set out within this report.



PSB Singapore

Choose certainty.  
Add value.

### **SUBJECT**

Lightfastness (xenon arc) test

### **CLIENT**

Greenply Industries Ltd  
1501-1505, Narain Manzil,  
23 Barakhamba Road  
New Delhi 110001  
India

Attn: Mr BL Sharma

### **SAMPLE SUBMISSION DATE**

17 Mar 2014

### **DATE TEST CONDUCTED**

27 May to 12 Jun 2014

### **DESCRIPTION OF SAMPLE**

One sample of "Greenlam CLADS™ Exterior Grade Compact Laminates" was submitted by the above client.



Laboratory:  
TÜV SÜD PSB Pte. Ltd.  
No.1 Science Park Drive  
Singapore 118221

Phone : +65-6885 1333  
Fax : +65-6776 8670  
E-mail: testing@tuv-sud-psb.sg  
www.tuv-sud-psb.sg  
Co. Reg : 199002667R

Regional Head Office:  
TÜV SÜD Asia Pacific Pte. Ltd.  
3 Science Park Drive, #04-01/05  
The Franklin, Singapore 118223  
TUV®



**METHOD OF TEST**

1. EN 438-2 : 2005  
 "High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins (usually called Laminates) - Part 2 : Determination of properties"  
 Clause 27 : Lightfastness (xenon arc)
2. BS EN ISO 4892-2 : 2000  
 "Plastics - Method of exposure to laboratory light sources - Part 2 : Xenon-arc Sources"

Apparatus used : Atlas Xenotest Alpha LM  
 Light source (continuous) : Air-cooled xenon-arc lamps  
 Filter system : Xenochrome 300 in Suprax cylinder  
 UV irradiance : 60 W/m<sup>2</sup> at 300 to 400 nm  
 Chamber temperature : 38 ± 3°C  
 Black standard temperature : 65 ± 3°C  
 Relative humidity : 50 ± 5%  
 Total radiant exposure : 51 MJ/ m<sup>2</sup> (300 – 400 nm)

3. ISO 105-A02 : 1993  
 "Grey scale for change in colour (including half-steps)"  
 The Grey Scale for assessing colour change ranges from 1 to 5:  
 5 : No perceived difference in colour between the exposed and unexposed portions  
 1 : Greatest contrast in colour between the exposed and unexposed portions

**RESULTS**

Sample Description	Lightfastness
"Greenlam CLADS™ Exterior Grade Compact Laminates"	Greater than grade 4 of the grey scale

Note : Sample exposure was discontinued when the contrast between the exposed and unexposed portions of the blue wool reference 6 was equal to grade 4 on the grey scale

**CHUA CHENG KOK**  
 TECHNICAL EXECUTIVE

**MRS WONG-LIN TAI HOE**  
 PRODUCT MANAGER  
 COATINGS  
 CHEMICAL & MATERIALS



“Greenlam CLADS™ Exterior Grade Compact Laminates”  
After Lightfastness (Xenon arc) Test



Please note that this Report is issued under the following terms:

1. This report applies to the sample of the specific product/equipment given at the time of its testing/calibration. The results are not used to indicate or imply that they are applicable to other similar items. In addition, such results must not be used to indicate or imply that TÜV SÜD PSB approves, recommends or endorses the manufacturer, supplier or user of such product/equipment, or that TÜV SÜD PSB in any way "guarantees" the later performance of the product/equipment. Unless otherwise stated in this report, no tests were conducted to determine long term effects of using the specific product/equipment.
2. The sample/s mentioned in this report is/are submitted/supplied/manufactured by the Client. TÜV SÜD PSB therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture, consignment or any information supplied.
3. Nothing in this report shall be interpreted to mean that TÜV SÜD PSB has verified or ascertained any endorsement or marks from any other testing authority or bodies that may be found on that sample.
4. This report shall not be reproduced wholly or in parts and no reference shall be made by the Client to TÜV SÜD PSB or to the report or results furnished by TÜV SÜD PSB in any advertisements or sales promotion.
5. Unless otherwise stated, the tests were carried out in TÜV SÜD PSB Pte Ltd, No.1 Science Park Drive Singapore 118221.

July 2011

