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.
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/m² 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/ m² (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

<table>
<thead>
<tr>
<th>Sample Description</th>
<th>Lightfastness</th>
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<tbody>
<tr>
<td>“Greenlam CLADS™ Exterior Grade Compact Laminates”</td>
<td>Greater than grade 4 of the grey scale</td>
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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
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July 2011