PRODUCT DATA SHEET

ADEKIT A 231 BG / H 6231 BG POLYOL / H 6231 ISOCYANATE

TWO-COMPONENT POLYURETHANE ADHESIVE

DESCRIPTION

Bonding of composite parts (RTM, SMC, Wet lay-up laminate ...) and metallic structures. The adhesive is a chemical thixotropy system suitable for equipment with pressurized tanks or by gravity.

PROPERTIES

- Two-component high performance room temperature curing Polyurethane adhesive.
- Non sagging paste product suitable for vertical applications and to fill irregular joints.
- Fast curing time.
- Excellent mechanical and thermal performances
- Excellent strength to dynamic loads (vibrations and impacts)
- Product adapted to stringent ageing and aggressive environments

PHYSICAL PROPERTIES

<table>
<thead>
<tr>
<th>Composition</th>
<th>POLYOL (A)</th>
<th>ISOCYANATE (B)</th>
<th>MIX</th>
<th>METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mix ratio by weight</td>
<td>100</td>
<td>78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mix ratio by volume at 25 °C</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td>Beige (BG)</td>
<td>Dark brown</td>
<td>Beige (BG)</td>
<td></td>
</tr>
<tr>
<td>Density at 25 °C</td>
<td>1.48 (KP)</td>
<td>1.15</td>
<td></td>
<td>LT-020</td>
</tr>
<tr>
<td>Density of cured product at 23 °C</td>
<td>-</td>
<td>1.34</td>
<td></td>
<td>LT-047</td>
</tr>
<tr>
<td>Viscosity at 25 °C (KP)</td>
<td>13.5</td>
<td>7</td>
<td>Paste</td>
<td>LT-001</td>
</tr>
<tr>
<td>Pot life on 25 g at 25 °C (KP)</td>
<td>-</td>
<td>-</td>
<td>3 – 4</td>
<td>LT-002</td>
</tr>
<tr>
<td>Open time on 7mm bead at 23 °C (min)</td>
<td>-</td>
<td>-</td>
<td>3 – 4</td>
<td>LT-006-B</td>
</tr>
</tbody>
</table>

(KP) Key properties. These values are enclosed in Certificate of Analysis.

MECHANICAL PROPERTIES (1)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardness (KP) (Shore D)</td>
<td>70</td>
<td>LT-022</td>
</tr>
<tr>
<td>Tensile strength (MPa)</td>
<td>14</td>
<td>ISO 527-2</td>
</tr>
<tr>
<td>Elongation at break (%)</td>
<td>30</td>
<td>ISO 527-2</td>
</tr>
<tr>
<td>YOUNG Modulus (MPa)</td>
<td>200</td>
<td>ISO 527-2</td>
</tr>
<tr>
<td>Recommended use temperature (°C)</td>
<td>15 to 25</td>
<td>-</td>
</tr>
<tr>
<td>Working temperature (°C)</td>
<td>- 40 to 130</td>
<td>LT-006-B</td>
</tr>
</tbody>
</table>

(1) Cured 16 hours at 70 °C

(2) Working temperature is defined as the temperature at which product keeps 80% of its initial Lap Shear Strength after 1000 hours ageing at this temperature, value on Aluminium, measured at 23 °C.
HANDLING TIME (1)

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Time (min)</th>
<th>Method</th>
<th>Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>23 °C</td>
<td>20</td>
<td>LT-006-B</td>
<td></td>
</tr>
<tr>
<td>40 °C</td>
<td>10</td>
<td>LT-006-B</td>
<td></td>
</tr>
</tbody>
</table>

(1) Handling time is defined as the time needed to obtain Lap Shear Strength on Aluminium at 23 °C, of 1 MPa.

MECHANICAL PROPERTIES ON ASSEMBLIES (1)

<table>
<thead>
<tr>
<th>Material</th>
<th>Failure Mode</th>
<th>Lap Shear Strength at 23 °C (MPa)</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium 2017A (sandblasted)</td>
<td>17 CF</td>
<td>Initial</td>
<td>LT-006-B</td>
</tr>
<tr>
<td>After wet cataplasm 7 days at 70 °C / 100 % RH</td>
<td>7 AF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>After 15 cycles D3 (2)</td>
<td>15 SCF/CF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stainless Steel 304 (sandblasted)</td>
<td>18 CF</td>
<td>Initial</td>
<td>LT-006-B</td>
</tr>
<tr>
<td>After wet cataplasm 7 days at 70 °C / 100 % RH</td>
<td>12 AF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electro-galvanized Steel (sandblasted)</td>
<td>15 SCF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electro-galvanized Steel (acetone wipe)</td>
<td>15 SCF/AF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABS (sanded + Isopropanol)</td>
<td>4 SF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PC (sanded + Isopropanol)</td>
<td>4 SF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PVC (sanded + Isopropanol)</td>
<td>5 SF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PMMA (sanded + Isopropanol)</td>
<td>5 SF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PA6E (sanded + Isopropanol)</td>
<td>2.5 SCF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GFR Polyester (Isopropanol wipe)</td>
<td>10 DF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GFR Epoxy (Isopropanol wipe)</td>
<td>22.5 CF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) Cured 16 hours at 70 °C
(2) Cycle D3 : 16 h at 40 °C/95 % RH + 3 h at -20 °C + 5 h at 70 °C/50 ± 5 % RH

CF: Cohesive Failure, AF: Adhesive Failure, SCF: Special Cohesive Failure, SF: Substrate Failure, DF: Delamination Failure, according to EN ISO 10365 Standard.

FLOATING ROLLER PEEL STRENGTH AT 23 °C

<table>
<thead>
<tr>
<th>Material</th>
<th>Peel Strength (kN/m)</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium 2017A (sandblasted)</td>
<td>6.5</td>
<td>ISO 4578</td>
</tr>
</tbody>
</table>

Sika Advanced Resins
PROCESSING

- **Equipment**: ADEKIT A 231 BG packaged in 400 ml cartridges require a manual or pneumatic gun. Please consult our technical department for applications needing a machine.
- **Substrate preparation**: The item to be bonded must be free of all dirt, oil or other foreign matter. A clean, dry surface is a must. Consult our Technical Support about surface preparations.

HANDLING PRECAUTIONS

Normal health and safety precautions should be observed when handling these products:

- Ensure good ventilation.
- Wear gloves, glasses and protective clothes.

For further information, please consult the Safety Data Sheet.

STORAGE CONDITIONS

Shelf life of **ADEKIT A 231 BG** is 7 months in a dry place and in original unopened containers at a temperature between 15 °C and 25 °C.

Shelf life of **ADEKIT H 6231 BG POLYOL** is 7 months in a dry place and in original unopened containers at a temperature between 15 °C and 25 °C.

Shelf life of **ADEKIT H 6231 ISOCYANATE** is 7 months in a dry place and in original unopened containers at a temperature between 15 °C and 25 °C.

PACKAGING

- **A 231 BG / 400ml**
- **H 6231 BG Polyol**
- **H 6231 Isocyanate**
- **KIT (H 6231 BG Polyol + H 6231 Isocyanate)**

Box of 12 cartridges
- **30 kg**
- **23 kg**

(30 kg + 23 kg)

FURTHER INFORMATION

The information herein is offered for general guidance only. Advice on specific applications is available on request from the Technical Department of Sika Advanced Resins. Copies of the following publications are available on request: Safety Data Sheets.
VALUE BASES

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

HEALTH AND SAFETY INFORMATION

For information and advice regarding transportation, handling, storage and disposal of chemical products, users shall refer to the actual Safety Data Sheets containing physical, ecological, toxicological and other related data.

LEGAL NOTICE

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika’s current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika’s recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product’s suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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