Description
HexBond™ 870 A/B is a two component high performance epoxy paste adhesive, ideal for use as a Liquid Shim or for potting applications. This high temperature performing thixotropic adhesive has been specially formulated for bonding of fibre-reinforced composite and metal substrates.

Qualifications
HexBond™ 870 A/B is qualified to AIMS 10-07-001

Features
- Thixotropic, gap filling high performance liquid shim adhesive
- Easy 2 : 1 volume mix ratio – available in dual-cartridges with static mixers
- Room temperature curing
- Long working life at ambient temperatures
- Excellent compression and shear properties
- High temperature performance

Product Data

<table>
<thead>
<tr>
<th>Property</th>
<th>HexBond™ 870 A</th>
<th>HexBond™ 870 B</th>
<th>Mixed Adhesive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance (Visual)</td>
<td>Dark Grey Paste</td>
<td>Off White Paste</td>
<td>Grey Paste</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.20</td>
<td>1.10</td>
<td>1.16</td>
</tr>
<tr>
<td>Viscosity at 25ºC</td>
<td>Thixotropic</td>
<td>Thixotropic</td>
<td>Thixotropic</td>
</tr>
<tr>
<td>Non Slump (Bead on Vertical Surface)</td>
<td>-</td>
<td>-</td>
<td>&gt; 5mm</td>
</tr>
</tbody>
</table>

Instructions for Use

Pretreatment
It is essential that all substrates to be used are free of contamination and are in as ideal a state for bonding as possible. As pretreatment will significantly vary dependent on substrates being used, please refer to the Hexcel publication HexBond™ Bonding Technology for optimum procedures.

Processing

<table>
<thead>
<tr>
<th>Mix Ratio</th>
<th>Parts by Weight</th>
<th>Parts by Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>HexBond™ 870 Part A</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>HexBond™ 870 Part B</td>
<td>45.5</td>
<td>50</td>
</tr>
</tbody>
</table>

Resin and hardener should be blended until they form a homogenous mix.

Storage
HexBond™ 870 A/B may be stored for up to 12 months at room temperature providing the components are stored in sealed containers. The expiry date is indicated on the label.
HexBond™ 870 A/B
Two Component Shimming and Potting Epoxy Paste Adhesive

Application Time

HexBond™ 870 Working life (AITM 3-004)

![Graph showing complex viscosity vs time for HexBond™ 870 A/B](image)

at 25°C = 187 minutes

Development of Shore D Hardness at 25°C:
- Drilling Time (Shore D 75) 7 1/2 hours
- Fastener Time (Shore D 78) 8 hours
- Shore D after 5 day 23°C cure 82

Typical Cured Properties

All the performance values given in this data sheet are based on experimental material with test results obtained under laboratory conditions. They are typical values expected for HexBond™ 870 A/B, they are provided solely as technical information and do not constitute a product specification.

Tensile Lap Shear Strength - Test Method EN2243-1
Cured 5 days at 23°C. Bond area : 25 x 12.5 mm

<table>
<thead>
<tr>
<th>Substrate</th>
<th>Test Temperature</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>2024 T3 Aluminium Alloy</td>
<td>23°C</td>
<td>43 MPa</td>
</tr>
<tr>
<td>(CSA pretreated, Unprimed)</td>
<td>80°C</td>
<td>27 MPa</td>
</tr>
<tr>
<td></td>
<td>120°C</td>
<td>22 MPa</td>
</tr>
<tr>
<td></td>
<td>150°C</td>
<td>11 MPa</td>
</tr>
</tbody>
</table>

Compression Strength at 23°C - Test Method ISO 604*
Cured 5 days at 23°C 98 MPa
*(36.8 mm high cylinders, 12.7 mm dia.)
Handling and Safety Precautions
Hexcel products are safe to use providing that certain precautions, normally taken when handling chemicals, are observed. The uncured materials must not be allowed to come into contact with foodstuffs or food utensils, and measures should be taken to prevent the uncured materials from coming in contact with the skin. Impervious rubber or plastic gloves should be worn in addition to eye protection.

The skin should be thoroughly cleansed at the end of each working period by washing with soap and warm water. The use of solvents is to be avoided. Disposable paper - not cloth towels - should be used to dry the skin. Adequate ventilation of the working area is recommended.

Disposal Recommendations
To avoid the possibility of a thermal runaway when disposing of surplus mixed product it is recommended to allow it to harden completely before disposal. Heat build-up during or after mixing of epoxy resins and hardeners is normal. The temperature rise depends on the amount of mixed material, the container shape and composition and the ambient temperature. Care should be taken to avoid an uncontrolled exothermic reaction by spreading the mixed material at room temperature in a thin film and leaving to cure in a well ventilated area. Refer to the MSDS for more information on the safety hazards of the individual components.
HexBond™ 870 A/B
Two Component Shimming and Potting Epoxy Paste Adhesive

For more information
Hexcel is a leading worldwide supplier of composite materials to aerospace and industrial markets. Our comprehensive range includes:

- HexTow® carbon fibers
- HexForce® reinforcements
- HiMax™ multiaxial reinforcements
- HexPly® prepregs
- HexMC®-i molding compounds
- HexFlow® RTM resins
- HexBond™ adhesives
- HexTool® tooling materials
- HexWeb® honeycombs
- Acousti-Cap® sound attenuating honeycomb
- Engineered core
- Engineered products
- Polyspeed® laminates
- Engineered products & pultruded profiles
- HexAM™ additive manufacturing

For US quotes, orders and product information call toll-free 1-800-688-7734. For other worldwide sales office telephone numbers and a full address list, please go to:

http://www.hexcel.com/contact

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