DA 409
Film Adhesive

DESCRIPTION
DA 409 is a modified epoxy film adhesive which cures at 250°F (121°C). The adhesive, recom-
mended for metal-to-metal bonds, bonding of composite and honeycomb structures, exceeds
the requirements of MMM-A-132, Type 1, Class 3, MIL-A-25463, Type 1, Class 1 and 2, and
ASTM-E-865. DA 409 can be supplied on woven or non-woven synthetic carriers.

PHYSICAL PROPERTIES
Weight: 0.060, 0.085 and 0.090 lbs/ft2
Volatile: Less than 1%
Separator: Release paper and poly film
Shelf Life: One year at 0°F in a sealed container
Six months at 40°F
Twenty days at 75°F

Standard Roll: 750 square feet at 50 inches wide
Other weights and widths up to 60 inches wide available

AVAILABLE CARRIERS

<table>
<thead>
<tr>
<th>Product</th>
<th>Carrier</th>
<th>Release Liner Color</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA 409</td>
<td>Wide open knit</td>
<td>Red</td>
<td>Enhances bondline thickness control; good structural and handling properties during layup.</td>
</tr>
<tr>
<td>T</td>
<td>Tight knit tricot</td>
<td>Red</td>
<td>Highest overall performance.</td>
</tr>
<tr>
<td>M</td>
<td>Random mat</td>
<td>Red</td>
<td>Provides flow control in bondline.</td>
</tr>
</tbody>
</table>

MECHANICAL PROPERTIES

<table>
<thead>
<tr>
<th>Mechanical Property</th>
<th>Conditions</th>
<th>Test Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile Strength</td>
<td>Normal Temperature 75°F</td>
<td>5400 psi</td>
</tr>
<tr>
<td>10 minutes at</td>
<td>180°F</td>
<td>4516 psi</td>
</tr>
<tr>
<td>10 minutes at</td>
<td>-67°F</td>
<td>5030 psi</td>
</tr>
<tr>
<td>Fatigue Strength</td>
<td>600 psi at 10^7 cycles</td>
<td>no failures</td>
</tr>
<tr>
<td>Mechanical Property</td>
<td>Conditions</td>
<td>Test Values</td>
</tr>
<tr>
<td>Creep Rupture</td>
<td>1600 psi at 75°F, 192 hours</td>
<td>0.000&quot; deformation</td>
</tr>
<tr>
<td></td>
<td>800 psi at 75°F, 192 hours</td>
<td>less than 0.002&quot; deformation</td>
</tr>
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</table>

ADHESIVE PREPPREGS FOR COMPOSITES MANUFACTURERS
P.O. BOX 264 1366 NORWICH RD. PLAINFIELD CT 06374
PHONE 860-564-7817 FAX 860-564-1535  www.prepregs.com
DA409 Film Adhesive

CURE CYCLE

DA 409 cures at 250°F (121°C) in one hour. Shorter cures are possible at higher temperatures. The adhesive may be cured using either standard heat-up methods or by in-hot, out-hot press applications. A pressure of 30 psi is recommended, however pressures of 10 to 50 psi may be used.

STORAGE

Store material in a contaminate free container and store at 0 degrees F for extended storage. For shorter storage time requirements store at 40 degrees F, this enables quicker stabilization times.

APPLICATION

Remove material from cold storage at least 20 hours prior to use to allow for stabilization at room temperature. Keep the material wrapped to prevent moisture from condensing on the adhesive. If details are cut and replaced into cold storage, shorter stabilization times may be used.

Be sure parts to be bonded have been thoroughly cleaned and dried before bonding. Cut stabilized adhesive to part size, remove the poly separator and apply to part. Remove paper separator and join parts together. Parts are now ready to be bonded, and may be cured in a press, autoclave, or vacuum bag in oven.

CLEAN UP

The adhesive can be removed from non-bonding areas with ketones or methylene chloride. Be sure to follow all Material Safety Data Sheet (MSDS) guidelines for the solvent to be used.

CAUTION

This material contains epoxy resins and amines which may cause irritation to sensitive skin. Avoid contact with eyes or skin. If contact with skin occurs, wash as soon as possible with soap and water. If contact with eyes occurs, flush with water for 15 minutes. Do not handle or use this material until Material Safety Data Sheet has been read and understood. The user of this material is required to use the necessary protective equipment as directed by applicable state and federal laws when handling, curing, and grinding this material.

IMPORTANT NOTICE

Information in this data sheet has been obtained under controlled laboratory conditions and is believed to be accurate. Properties listed are typical values and are not intended for use in preparing specifications. Actual values may vary. No warranty is expressed or implied for which APCM assumes legal responsibility. APCM cannot be responsible for misapplication or handling and use under conditions beyond its control and under no circumstances shall be liable for incidental or consequential damage resulting from handling or use of this material.

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