Product Description
Epoxy-Lock® is a powerful film for locking and sealing preapplied adhesive. Epoxy-Lock is factory preapplied to either internal or external threads. It remains inert on the fastener until assembly of the threads mixes the resin. The resin fills the voids of the threads and cures to lock and seal the assembly.

Typical Applications
Epoxy-Lock prevents loosening through vibration to provide locking and sealing of threaded assemblies including:
- Ring gear bolts
- Head bolts
- Intake manifold bolts
- Transmission bolts

Properties of Uncured Material
- Chemical Type: Epoxy
- Appearance: Orange
- Toxicity: Low

Curing Performance (fastener assembly)
Cure speed vs. substrate
The graph shows the rate of cure of an M-10 nut and bolt plated with various finishes. The breakaway strength was determined using industrial procedures.

Performance of Cured Material

<table>
<thead>
<tr>
<th>Typical Values</th>
<th>Breakaway torque</th>
<th>Temperature Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevailing on-torque</td>
<td>0.55 N·m</td>
<td>-65°F to 400°F</td>
</tr>
<tr>
<td>Breakaway torque</td>
<td>50 N·m</td>
<td>(-54°C to 200°C)</td>
</tr>
<tr>
<td>Cure time at Room Temp</td>
<td>72 hours</td>
<td></td>
</tr>
</tbody>
</table>

Prevailing on-torque and Breakaway torque data are from test results conducted on an M-10 x 1.5 class 10.9 phos-oil bolts and M-10 x 1.5 class 10 nuts.

Environmental and Fluid Resistance
(Decrease values)

<table>
<thead>
<tr>
<th>Typical Values</th>
<th>Heat age</th>
<th>Engine oil @ 150°C</th>
<th>Brake fluid @ 150°C</th>
<th>ATF @ 150°C</th>
<th>50/50 water/ethylene glycol @ 120°C</th>
<th>Water @ 100°C</th>
<th>Diesel fuel @ 25°C</th>
<th>15/85 Methanol/Gasoline @ 25°C</th>
<th>Ethyl Alcohol @ 25°C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>38 N·m</td>
<td>22 N·m</td>
<td>16 N·m</td>
<td>40 N·m</td>
<td>27 N·m</td>
<td>32 N·m</td>
<td>88 N·m</td>
<td>85 N·m</td>
<td>56 N·m</td>
</tr>
</tbody>
</table>

Heat age testing was conducted on M-10 x 1.5 phos-oil bolts and nuts. Assembled fasteners were aged at 200°C for 500 hours and allowed to cool to room temperature before breakaway test.

Immersion testing was conducted using M-10 x 1.5 phos-oil bolts and nuts. Assembled fasteners were submerged in each fluid for 1000 hours at the temperature. Assemblies were allowed to cool to room temperature before breakaway test.
General Information

Storage
Fasteners coated with Epoxy-Lock should be stored in a cool and dry location at temperatures between -10 °C to 35 °C. Optimal storage is 25±4°C.

Note
The data are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is recommended that the product be tested in the application for which it is to be used.

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