PRODUCT DESCRIPTION

LOCTITE® 242® provides the following product characteristics:

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>Acrylic</td>
</tr>
<tr>
<td>Chemical Type</td>
<td>Dimethacrylate ester</td>
</tr>
<tr>
<td>Appearance (uncured)</td>
<td>Blue liquid</td>
</tr>
<tr>
<td>Fluorescence</td>
<td>Positive under UV light</td>
</tr>
<tr>
<td>Components</td>
<td>One component - requires no mixing</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Medium, thixotropic</td>
</tr>
<tr>
<td>Cure</td>
<td>Anaerobic</td>
</tr>
<tr>
<td>Secondary Cure</td>
<td>Activator</td>
</tr>
<tr>
<td>Application</td>
<td>Threadlocking</td>
</tr>
<tr>
<td>Strength</td>
<td>Medium</td>
</tr>
</tbody>
</table>

LOCTITE® 242® is designed for the locking and sealing of threaded fasteners which require normal disassembly with standard hand tools. The product cures when confined in the absence of air between close fitting metal surfaces and prevents loosening and leakage from shock and vibration. Suitable for applications on less active substrates such as plated surfaces, where disassembly with hand tools is required for servicing. The thixotropic nature of LOCTITE® 242® reduces the migration of liquid product after application to the substrate.

TYPICAL PROPERTIES OF UNCURED MATERIAL

<table>
<thead>
<tr>
<th>Properties</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Gravity @ 25 °C</td>
<td>1.1</td>
</tr>
<tr>
<td>Flash Point - See SDS</td>
<td></td>
</tr>
<tr>
<td>Viscosity, Brookfield - RVF, 25 °C, mPa·s (cP):</td>
<td></td>
</tr>
<tr>
<td>Spindle 3, speed 2 rpm, Helipath</td>
<td>≥5,000</td>
</tr>
<tr>
<td>Spindle 3, speed 20 rpm, Helipath</td>
<td>800 to 1,600</td>
</tr>
<tr>
<td>Viscosity, Brookfield - RVT,25°C,mPa·s (cP):</td>
<td></td>
</tr>
<tr>
<td>Spindle 3, speed 20 rpm</td>
<td>900 to 1,400</td>
</tr>
<tr>
<td>Lubricity, ASTM D5648, K value, ASTM D 5648, %:</td>
<td></td>
</tr>
<tr>
<td>3/8 x 16 Phosphate &amp; Oil Nuts, Bolts, Steel -10 to 10 Washer</td>
<td></td>
</tr>
</tbody>
</table>

(In critical applications, it is necessary to determine the K values independently. Henkel Corporation makes no warranty of specific performance on any individual fastener):

TYPICAL CURING PERFORMANCE

Cure Speed vs. Substrate

The rate of cure will depend on the substrate used. The graph below shows the breakaway strength developed with time on M10 steel nuts and bolts compared to different materials and tested according to ISO 10964.

Cure Speed vs. Temperature

The rate of cure will depend on the temperature. The graph below shows the breakaway strength developed with time at different temperatures on M10 steel nuts and bolts and tested according to ISO 10964.
Cure Speed vs. Activator

Where cure speed is unacceptably long, or large gaps are present, applying activator to the surface will improve cure speed. The graph below shows the breakaway strength developed with time on M10 zinc dichromate steel nuts and bolts using Activator SF 7471™ or SF 7649™ and tested according to ISO 10964.

TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

After 1 hour @ 22 °C

Breakaway Torque, ISO 10964:
- 3/8 x 16 steel nuts (grade 2) and bolts (grade 5)
  - N·m 5.6 to 17
  - (lb.in) (50 to 150)

Prevail Torque, ISO 10964:
- 3/8 x 16 steel nuts (grade 2) and bolts (grade 5)
  - N·m 1.7 to 6.8
  - (lb.in) (15 to 60)

After 24 hours @ 22 °C

Breakaway Torque, ISO 10964:
- 3/8 x 16 steel nuts (grade 2) and bolts (grade 5)
  - N·m 7.9 to 17
  - (lb.in) (70 to 150)
- 3/8 x 16 cadmium nuts and bolts
  - N·m 1.1 to 6.8
  - (lb.in) (10 to 60)
- 3/8 x 16 zinc nuts and bolts
  - N·m 2.3 to 6.8
  - (lb.in) (20 to 60)
- M10 black oxide steel nuts and bolts
  - N·m 8 to 19
  - (lb.in) (71 to 198)

TYPICAL ENVIRONMENTAL RESISTANCE

Cured for 24 hours @ 22 °C

Breakaway Torque, ISO 10964:
- M10 steel nuts and bolts

Hot Strength

Tested at temperature

Heat Aging

Aged at temperature indicated and tested @ 23 °C

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**General Information**

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

For safe handling information on this product, consult the Safety Data Sheet (SDS).

Where aqueous washing systems are used to clean the surfaces before bonding, it is important to check for compatibility of the washing solution with the adhesive. In some cases these aqueous washes can affect the cure and performance of the adhesive.

This product is not normally recommended for use on plastics (particularly thermoplastic materials where stress cracking of the plastic could result). Users are recommended to confirm compatibility of the product with such substrates.

### Directions for Use

**For Assembly**

1. For best results, clean all surfaces (external and internal) with a LOCTITE® cleaning solvent and allow to dry.
2. If the material is an inactive metal or the cure speed is too slow, spray all threads with Activator 7471™ or 7649™ and allow to dry.
3. Shake the product thoroughly before use.
4. To prevent the product from clogging in the nozzle, do not allow the tip to touch metal surfaces during application.
5. For Thru Holes, apply several drops of the product onto the bolt at the nut engagement area.
6. For Blind Holes, apply several drops of the product down the internal threads to the bottom of the hole.
7. For Sealing Applications, apply a 360° bead of product to the leading threads of the male fitting, leaving the first thread free. Force the material into the threads to thoroughly fill the voids. For bigger threads and voids, adjust product amount accordingly and apply a 360° bead of product on the female threads also.
8. Assemble and tighten as required.

**For Disassembly**

1. Remove with standard hand tools.
2. In rare instances where hand tools do not work because of excessive engagement length, apply localized heat to nut or bolt to approximately 250 °C. Disassemble while hot.

### Clean-up

1. Cured product can be removed with a combination of soaking in a LOCTITE® solvent and mechanical abrasion such as a wire brush.

### Conversions

- $(^\circ C \times 1.8) + 32 = ^\circ F$
- $kV/mm \times 25.4 = V/mil$
- $mm / 25.4 = mil$
- $N \times 0.225 = lb$
- $N/mm \times 5.71 = lb/in$
- $N/mm^2 \times 145 = psi$
- $MPa \times 145 = psi$
- $N \times 8.851 = lb in$
- $N \times 0.738 = lb ft$
- $N/mm \times 0.142 = oz in$
- $mPa \cdot s = cP$

### Disclaimer

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

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Reference 1.7