



# LOCTITE<sup>®</sup> 8017<sup>™</sup>

September 2006

## PRODUCT DESCRIPTION

LOCTITE<sup>®</sup> 8017<sup>™</sup> provides the following product characteristics:

<b>Technology</b>	Anti-Seize
<b>Appearance</b>	Black
<b>Cure</b>	Non-curing
<b>Application</b>	Lubrication
<b>Specific Benefit</b>	<ul style="list-style-type: none"> <li>• Use for high temperatures</li> <li>• Use for heavy duty static loads</li> <li>• Use where dirty and dusty environments dictate a dry lubricant - one that won't attract dirt</li> </ul>

LOCTITE<sup>®</sup> 8017<sup>™</sup> is a molybdenum-disulfide based solid film lubricant. It is a heavy-duty lubricant used for general plant maintenance, metal working trade, machinery manufacturers and manufacturers of military and commercial jet engines. For continuous use in sliding friction, at temperatures from -29 °C to +400 °C. For anti-seize lubrication, LOCTITE<sup>®</sup> 8017<sup>™</sup> functions from -29 °C to +1315 °C . Typical applications include **Maintenance** - threaded lubricant, dry bearing surfaces, slides, guides, pins, conveyor chains, exposed "dry" gears, flexible shafts, press fits, valve stems, shaft/packaging wear-in, "easy-off" coating for boiler exhaust surface deposits, power transmission couplings, **Production** - swaging, metal forming, cold extrusion, warm extrusion, cold and warm headings, "dry" lubricant for mechanical linkages, **Aerospace** - gas turbine engine blades, valves, bearings, vacuum and radiation applications, **Automotive, Heavy Equipment** - cam wear-in, brake mechanisms, cables, gear couplings, **Electrical** - circuit breakers, rheostats, switches, **Petro Chemical** - valves, boilers, flanges, dampers.

### Typical Surface Treatments Compatible with LOCTITE<sup>®</sup> 8017<sup>™</sup>:

Aluminum and Magnesium - anodize coatings  
 Carbon Steel - phosphate coating  
 Stainless Steel - passivated with acid and dichromate  
 Titanium - phosphate/fluoride treatment

## TYPICAL PROPERTIES

Specific Gravity @ 25 °C 1.3  
 Coverage, 20 µm Dry Film 20 m<sup>2</sup> per kg

## TYPICAL PERFORMANCE

An anti-seize lubricant used on a bolt helps to develop greater clamp load for the same torque compared to an unlubricated bolt. An additional benefit is greater uniformity in clamp load among a series of bolts. The relationship between torque and clamp load is expressed in the following equation:

$$T = K \times F \times D$$

**T** = Torque (N·m, lb.in, lb.ft)  
**K** = Torque coefficient or nut factor, determine experimentally  
**F** = Clamp load (N, lb.)  
**D** = Nominal diameter of bolt (mm, in.)

Torque coefficient, k:

12.7 mm steel bolts (grade 8) and nuts (grade 5)	0.06 to 0.12
12.7 mm steel bolts (grade 8) and nuts (grade 5), solvent cleaned, not lubricated	0.27

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

## GENERAL INFORMATION

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

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

## Directions for use

1. LOCTITE<sup>®</sup> 8017<sup>™</sup> may be applied by brushing or dipping directly to clean metal surfaces.
2. Prior surface treatments -- common metal protecting conversion coatings -- can be used to enhance corrosion resistance and wear life.
3. **Air Drying** - Generally 1 hour at room temperature or less if parts are warm or heated.
4. **Baking** - Any of the following cure schedules will cause LOCTITE<sup>®</sup> 8017<sup>™</sup> to theroset, making it fluid and solvent resistant: 30 minutes @ 260 °C, 1 hour @ 232 °C, or 2 hours @ 204 °C.
5. **Fluid Resistance** - An air-dried film of LOCTITE<sup>®</sup> 8017<sup>™</sup> can be softened and dissolved by organic solvents, oils, etc., but will withstand water and water solutions. Oven cured films will not dissolve in most solvents and fluids.

## Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

**Storage**

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

**Optimal Storage: 8 °C to 21 °C. Storage below 8 °C or greater than 28 °C can adversely affect product properties.**

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

**Conversions**

$$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$$

$$\text{kV/mm} \times 25.4 = \text{V/mil}$$

$$\text{mm} / 25.4 = \text{inches}$$

$$\mu\text{m} / 25.4 = \text{mil}$$

$$\text{N} \times 0.225 = \text{lb}$$

$$\text{N/mm} \times 5.71 = \text{lb/in}$$

$$\text{N/mm}^2 \times 145 = \text{psi}$$

$$\text{MPa} \times 145 = \text{psi}$$

$$\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$$

$$\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$$

$$\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$$

$$\text{mPa}\cdot\text{s} = \text{cP}$$

**Note**

The data contained herein 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 the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

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Reference 1.0