

## LOCTITE® 232™

July 2007

### PRODUCT DESCRIPTION

LOCTITE® 232™ provides the following product characteristics:

<b>Technology</b>	Acrylic
<b>Chemical Type</b>	Methacrylate ester
<b>Appearance (uncured)</b>	Opaque brown liquid <sup>LMS</sup>
<b>Components</b>	One component - requires no mixing
<b>Viscosity</b>	Medium
<b>Cure</b>	Anaerobic
<b>Application</b>	Retaining
<b>Strength</b>	Medium

The lubricating properties of LOCTITE® 232™ facilitate assembly when heavy interference or high torque values are utilized. LOCTITE® 232™ prevents galling and pick-up during disassembly and eliminates corrosion within the joints while increasing dismounting forces. Typically used for highly torqued threaded assemblies and heavy press fits.

### TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C	1.02
Flash Point - See SDS	
Viscosity, Brookfield - RVT, 25 °C, mPa·s (cP): Spindle 4, speed 20 rpm,	3,600 to 8,800 <sup>LMS</sup>

### TYPICAL PERFORMANCE OF CURED MATERIAL

#### Adhesive Properties

After 2 hours @ 121 °C	
Compressive Shear Strength, ISO 10123: Steel pins and collars	N/mm <sup>2</sup> ≥7.0 <sup>LMS</sup> (psi) (1,015)

### 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 with Activator 7471™ or 7649™ and allow to dry.
3. **For Slip Fitted Assemblies**, apply adhesive around the leading edge of the pin and the inside of the collar and use a rotating motion during assembly to ensure good coverage.
4. **For Press Fitted Assemblies**, apply adhesive thoroughly to both bond surfaces and assemble at high press on rates.
5. **For Shrink Fitted Assemblies** the adhesive should be coated onto the pin, the collar should then be heated to create sufficient clearance for free assembly.
6. Parts should not be disturbed until sufficient handling strength is achieved.
7. Allow a minimum of 3 days cure after application, before testing disassembly forces.

#### For Disassembly

1. Apply localized heat to the assembly to approximately 250 °C. Disassemble while hot.

#### For Cleanup

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

#### Loctite Material Specification<sup>LMS</sup>

LMS dated December 10, 2002. Test reports for each batch are available for the indicated properties. LMS test reports include selected QC test parameters considered appropriate to specifications for customer use. Additionally, comprehensive controls are in place to assure product quality and consistency. Special customer specification requirements may be coordinated through Henkel Quality.

#### 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 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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