LOCTITE® 084™

June 2012

PRODUCT DESCRIPTION

LOCTITE® 084™ provides the following product characteristics:

Technology	Acrylic
Chemical Type	Dimethacrylate ester
Appearance (uncured)	Blue liquid[LMS]
Fluorescence	Positive under UV light[LMS]
Components	One component - requires no mixing
Viscosity	Low
Cure	Anaerobic
Application	Threadlocking
Strength	Medium

LOCTITE® 084™ is used to lock and seal fine threaded nuts, bolts and studs in a wide variety of applications where removal with ordinary hand tools is necessary. This product is also known as LOCTITE® 084™ Grade C.

Mil-S-22473E

LOCTITE® 084™ is tested to the lot requirements of Military Specification Mil-S-22473E. **Note:** This is a regional approval. Please contact your local Technical Service Center for more information and clarification.

ASTM D5363

Each lot of adhesive produced in North America is tested to the general requirements defined in paragraphs 5.1.1 and 5.1.2 and to the Detail Requirements defined in section 5.2.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C	1.05
Flash Point - See MSDS	
Viscosity, Cannon Fenske, ISO 3104, mPa·s (cP)	10 to 25[LMS]

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties:

Coefficient of Thermal Expansion, ISO 11359-2, K^{-1}	100×10^{-6}
Coefficient of Thermal Conductivity, ISO 8302, W/(m·K)	0.1
Specific Heat, kJ/(kg·K)	0.3

Electrical Properties:

Dielectric Breakdown Strength, IEC 60243-1, kV/mm	9.8

TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

After 6 hours @ 22 °C

Prevail Torque, ISO 10964:

3/8 x 24 steel nuts (grade 2) and bolts (grade 2)	N·m (lb.in.)	2.3 to 11.3[LMS] (20 to 100)

After 24 hours @ 22 °C

Breakaway Torque, ISO 10964:

3/8 x 24 steel nuts (grade 2) and bolts (grade 2)	N·m (lb.in.)	6 (50)

Prevail Torque, ISO 10964:

3/8 x 24 steel nuts (grade 2) and bolts (grade 2)	N·m (lb.in.)	4.5 to 11.3[LMS] (40 to 100)

TYPICAL ENVIRONMENTAL RESISTANCE

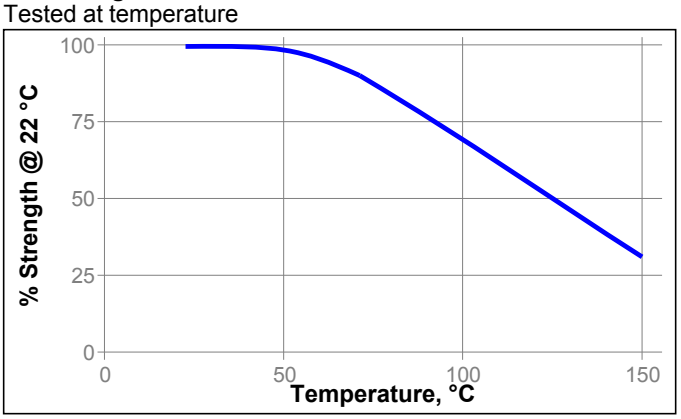
Cured for 72 hours @ 22 °C

Breakaway Torque, ISO 10964:

3/8 x 24 steel nuts (grade 2) and bolts (grade 2)

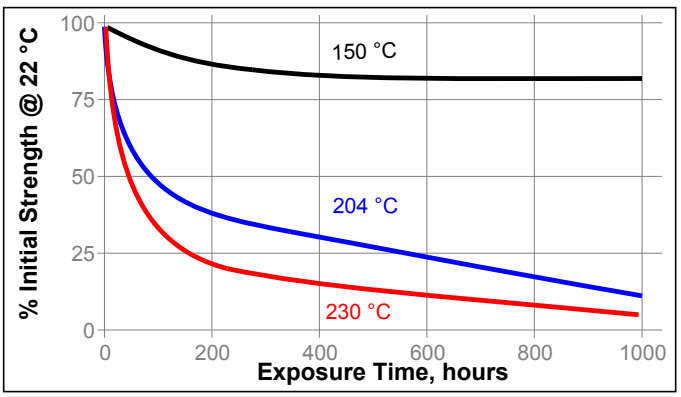
Hot Strength

Tested at temperature



Heat Aging

Aged at temperature indicated and tested @ 22 °C



Chemical/Solvent Resistance
Aged under conditions indicated and tested @ 22 °C.

		% of initial strength
Environment	**°C**	**300 h**
Motor oil (MIL-L-46152)	93	100
Phosphate ester	93	100
Water	93	110
Ethylene glycol	93	110
Ethanol	22	115
Acetone	22	115

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 Material Safety Data Sheet (MSDS).

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 Pre-assembled Threaded Parts with Thru Holes

1. Prior to assembly, clean all threads (bolt and hole) with a LOCTITE® cleaning solvent and allow to dry.
2. **For Thru Holes**, apply several drops of product at screw and body juncture.
3. Avoid touching the bottle tip to the metal surface.
4. This product is not recommended for pre-assembled threads in a blind hole.

For Disassembly

1. Remove with standard hand tools.
2. Where hand tools do not work because of excessive engagement length or large diameters (over 1"), apply localized heat 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[LMS]
LMS dated September 01, 1995. 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
(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
µm / 25.4 = mil
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
MPa x 145 = psi
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = 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.

Trademark usage

Reference 1.2