



Revision Number: 006.0

Issue date: 01/19/2018

**1. PRODUCT AND COMPANY IDENTIFICATION**

|                               |  |                     |               |
|-------------------------------|--|---------------------|---------------|
| <b>Product name:</b>          | <b>272 Threadlocker High Strength</b>          | <b>IDH number:</b>  | 88442         |
| <b>Product type:</b>          | Anaerobic Adhesive                             | <b>Item number:</b> | 27240         |
| <b>Restriction of Use:</b>    | None identified                                | <b>Region:</b>      | United States |
| <b>Company address:</b>       | <b>Contact information:</b>                    |                     |               |
| Henkel Corporation            | Telephone: +1 (860) 571-5100                   |                     |               |
| One Henkel Way                | MEDICAL EMERGENCY Phone: Poison Control Center |                     |               |
| Rocky Hill, Connecticut 06067 | 1-877-671-4608 (toll free) or 1-303-592-1711   |                     |               |
|                               | TRANSPORT EMERGENCY Phone: CHEMTREC            |                     |               |
|                               | 1-800-424-9300 (toll free) or 1-703-527-3887   |                     |               |
|                               | Internet: www.henkelna.com                     |                     |               |

**2. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

**DANGER:** CAUSES SKIN IRRITATION.  
 MAY CAUSE AN ALLERGIC SKIN REACTION.  
 CAUSES SERIOUS EYE IRRITATION.  
 TOXIC IF INHALED.  
 SUSPECTED OF CAUSING CANCER.  
 MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.

| HAZARD CLASS                                       | HAZARD CATEGORY |
|--|-----------------|
| ACUTE TOXICITY INHALATION                          | 3               |
| SKIN IRRITATION                                    | 2               |
| EYE IRRITATION                                     | 2A              |
| SKIN SENSITIZATION                                 | 1               |
| CARCINOGENICITY                                    | 2               |
| SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE | 2               |

**PICTOGRAM(S)**



**Precautionary Statements**

**Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe vapors, mist, or spray. Wash affected area thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, clothing, eye and face protection.

**Response:** IF ON SKIN: Wash with plenty of water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical attention. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing.

**Storage:** Store in a well-ventilated place. Keep container tightly closed. Store locked up.

**Disposal:** Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

| Hazardous Component(s)                            | CAS Number  | Percentage* |
|---|-------------|-------------|
| 2-Propenoic acid, 2-methyl-, (1-methylethylidene) | 24448-20-2  | 70 - 80     |
| Maleimide resin                                   | 3006-93-7   | 10 - 20     |
| Hydroxyalkyl methacrylate                         | 27813-02-1  | 1 - 5       |
| Cumene hydroperoxide                              | 80-15-9     | 1 - 5       |
| Silica, amorphous, fumed, crystal-free            | 112945-52-5 | 1 - 5       |
| Cumene  | 98-82-8     | 0.1 - 1     |
| 1-Acetyl-2-phenylhydrazine                        | 114-83-0    | 0.1 - 1     |

\* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

### 4. FIRST AID MEASURES

**Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Skin contact:** Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Wash clothing before reuse. Get medical attention.

**Eye contact:** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

**Ingestion:** DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

**Symptoms:** See Section 11.

### 5. FIRE FIGHTING MEASURES

**Extinguishing media:** Water spray (fog), foam, dry chemical or carbon dioxide.

**Special firefighting procedures:** Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. In case of fire, keep containers cool with water spray.

**Unusual fire or explosion hazards:** Uncontrolled polymerization may occur at high temperatures resulting in explosions or rupture of storage containers.

**Hazardous combustion products:** Oxides of nitrogen. Oxides of carbon. Irritating vapors.

### 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

**Environmental precautions:** Do not allow product to enter sewer or waterways.

**Clean-up methods:**

Remove all sources of ignition. Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up as much material as possible. Store in a partly filled, closed container until disposal. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

## 7. HANDLING AND STORAGE

**Handling:**

Use only with adequate ventilation. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Keep container closed. Refer to Section 8.

**Storage:**

For safe storage, store at or below 38 °C (100.4 °F)  
Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use. Keep container dry.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

| Hazardous Component(s)                            | ACGIH TLV  | OSHA PEL   | AIHA WEEL                                     | OTHER                   |
|---|--|--|---|-------------------------|
| 2-Propenoic acid, 2-methyl-, (1-methylethylidene) | None   | None   | None  | None                    |
| Maleimide resin                                   | None   | None   | None  | None                    |
| Hydroxyalkyl methacrylate                         | None   | None   | None  | 1 ppm TWA<br>3 ppm STEL |
| Cumene hydroperoxide                              | None   | None   | 1 ppm (6 mg/m <sup>3</sup> )<br>TWA<br>(SKIN) | None                    |
| Silica, amorphous, fumed, crystal-free            | 10 mg/m <sup>3</sup> TWA<br>Inhalable dust.<br>3 mg/m <sup>3</sup> TWA<br>Respirable fraction. | 20 MPPCF TWA<br>0.8 mg/m <sup>3</sup> TWA        | None  | None                    |
| Cumene  | 50 ppm TWA   | 50 ppm (245 mg/m <sup>3</sup> )<br>PEL<br>(SKIN) | None  | None                    |
| 1-Acetyl-2-phenylhydrazine                        | None   | None   | None  | None                    |

**Engineering controls:**

Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

**Respiratory protection:**

Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

**Eye/face protection:**

Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists. Safety showers and eye wash stations should be available.

**Skin protection:**

Butyl rubber gloves. Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact. Natural rubber gloves. Neoprene gloves.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state:**

Liquid

**Color:**

Red

**Odor:**

Mild

**Odor threshold:**

Not available.

**pH:**

Not applicable

**Vapor pressure:**

< 5 mm hg (80 °F (26.7 °C))

**Boiling point/range:**

Not available.

|   |  |
|---|--|
| <b>Melting point/ range:</b>                    | Not available.                               |
| <b>Specific gravity:</b>                        | 1.11   |
| <b>Vapor density:</b>                           | Not available.                               |
| <b>Flash point:</b>                             | > 93.3 °C (> 199.94 °F) Tagliabue closed cup |
| <b>Flammable/Explosive limits - lower:</b>      | Not available.                               |
| <b>Flammable/Explosive limits - upper:</b>      | Not available.                               |
| <b>Autoignition temperature:</b>                | Not available.                               |
| <b>Flammability:</b>                            | Not applicable                               |
| <b>Evaporation rate:</b>                        | Not available.                               |
| <b>Solubility in water:</b>                     | Slight                                       |
| <b>Partition coefficient (n-octanol/water):</b> | Not available.                               |
| <b>VOC content:</b>                             | 0.19 %; 2.08 g/l                             |
| <b>Viscosity:</b>                               | Not available.                               |
| <b>Decomposition temperature:</b>               | Not available.                               |

## 10. STABILITY AND REACTIVITY

|  |  |
|--|--|
| <b>Stability:</b>                        | Stable under normal conditions of storage and use.   |
| <b>Hazardous reactions:</b>              | Hazardous polymerization may occur in the presence of excess peroxides and metals contamination.                   |
| <b>Hazardous decomposition products:</b> | Oxides of carbon. Oxides of nitrogen. Irritating vapors.   |
| <b>Incompatible materials:</b>           | Reducing agents. Strong alkalis. Strong acids and oxidizing agents. Other polymerization initiators.               |
| <b>Reactivity:</b>                       | Not available.   |
| <b>Conditions to avoid:</b>              | Elevated temperatures. Heat, flames, sparks and other sources of ignition. Store away from incompatible materials. |

## 11. TOXICOLOGICAL INFORMATION

|                                     |                                   |
|-------------------------------------|-----------------------------------|
| <b>Relevant routes of exposure:</b> | Skin, Inhalation, Eyes, Ingestion |
|-------------------------------------|-----------------------------------|

### Potential Health Effects/Symptoms

**Inhalation:** Toxic by inhalation. Inhalation of vapors or mists of the product may be irritating to the respiratory system.  
**Skin contact:** Causes skin irritation. May cause allergic skin reaction.  
**Eye contact:** Causes serious eye irritation.  
**Ingestion:** May cause gastrointestinal tract irritation if swallowed.

| Hazardous Component(s)                            | LD50s and LC50s   | Immediate and Delayed Health Effects                               |
|---|---|--|
| 2-Propenoic acid, 2-methyl-, (1-methylethylidene) | None  | Irritant, Allergen   |
| Maleimide resin                                   | None  | No Target Organs   |
| Hydroxyalkyl methacrylate                         | None  | Irritant, Allergen   |
| Cumene hydroperoxide                              | Inhalation LC50 (Mouse, 4 h) = 200 mg/l   | Allergen, Central nervous system, Corrosive, Irritant, Mutagen     |
| Silica, amorphous, fumed, crystal-free            | None  | Nuisance dust  |
| Cumene  | Oral LD50 (Rat) = 2.91 g/kg<br>Oral LD50 (Rat) = 1,400 mg/kg<br>Inhalation LC50 (Rat, 4 h) = 8000 ppm | Central nervous system, Irritant, Lung                             |
| 1-Acetyl-2-phenylhydrazine                        | Oral LD50 (Mouse) = 270 mg/kg   | Allergen, Blood, Kidney, Mutagen, Some evidence of carcinogenicity |

| Hazardous Component(s)                            | NTP Carcinogen                                   | IARC Carcinogen | OSHA Carcinogen (Specifically Regulated) |
|---|--|-----------------|--|
| 2-Propenoic acid, 2-methyl-, (1-methylethylidene) | No   | No              | No                                       |
| Maleimide resin                                   | No   | No              | No                                       |
| Hydroxyalkyl methacrylate                         | No   | No              | No                                       |
| Cumene hydroperoxide                              | No   | No              | No                                       |
| Silica, amorphous, fumed, crystal-free            | No   | No              | No                                       |
| Cumene  | Reasonably Anticipated to be a Human Carcinogen. | Group 2B        | No                                       |
| 1-Acetyl-2-phenylhydrazine                        | No   | No              | No                                       |

## 12. ECOLOGICAL INFORMATION

**Ecological information:** Not available.

## 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

**Recommended method of disposal:** Follow all local, state, federal and provincial regulations for disposal.

**Hazardous waste number:** Not a RCRA hazardous waste.

## 14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

### U.S. Department of Transportation Ground (49 CFR)

**Proper shipping name:** RQ, Environmentally hazardous substance, liquid, n.o.s.  
**Hazard class or division:** 9  
**Identification number:** UN 3082  
**Packing group:** III  
**DOT Hazardous Substance(s):** alpha,alpha-Dimethylbenzylhydroperoxide

**International Air Transportation (ICAO/IATA)**

**Proper shipping name:** RQ, Environmentally hazardous substance, liquid, n.o.s.  
**Hazard class or division:** 9  
**Identification number:** UN 3082  
**Packing group:** III

**Water Transportation (IMO/IMDG)**

**Proper shipping name:** RQ, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
**Hazard class or division:** 9  
**Identification number:** UN 3082  
**Packing group:** III

|                                   |
|-----------------------------------|
| <b>15. REGULATORY INFORMATION</b> |
|-----------------------------------|

**United States Regulatory Information**

**TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

**TSCA 12 (b) Export Notification:** None above reporting de minimis

**CERCLA/SARA Section 302 EHS:** None above reporting de minimis.  
**CERCLA/SARA Section 311/312:** Immediate Health, Delayed Health  
**CERCLA/SARA Section 313:** This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Cumene hydroperoxide (CAS# 80-15-9).

**CERCLA Reportable quantity:** Cumene hydroperoxide (CAS# 80-15-9) 10 lbs. (4.54 kg)

**California Proposition 65:** This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

**Canada Regulatory Information**

**CEPA DSL/NDSL Status:** Contains one or more components listed on the Non-Domestic Substances List. All other components are listed on or are exempt from listing on the Domestic Substances List. Components listed on the NDSL must be tracked by all Canadian Importers of Record as required by Environment Canada. They may be imported into Canada in limited quantities. Please contact Regulatory Affairs for additional details.

|                              |
|------------------------------|
| <b>16. OTHER INFORMATION</b> |
|------------------------------|

**This safety data sheet contains changes from the previous version in sections: 2**

**Prepared by:** Product Safety and Regulatory Affairs

**Issue date:** 01/19/2018

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# LOCTITE<sup>®</sup> 272<sup>™</sup>

December 2013

## PRODUCT DESCRIPTION

LOCTITE<sup>®</sup> 272<sup>™</sup> provides the following product characteristics:

|                      |                                    |
|----------------------|------------------------------------|
| <b>Technology</b>    | Acrylic                            |
| Chemical Type        | Dimethacrylate ester               |
| Appearance (uncured) | Red-orange liquid <sup>LMS</sup>   |
| Components           | One component - requires no mixing |
| Viscosity            | Medium                             |
| <b>Cure</b>          | Anaerobic                          |
| Secondary Cure       | Activator                          |
| <b>Application</b>   | Threadlocking                      |
| Strength             | High                               |

LOCTITE<sup>®</sup> 272<sup>™</sup> is designed for the permanent locking and sealing of threaded fasteners. The product cures when confined in the absence of air between close fitting metal surfaces and prevents loosening and leakage from shock and vibration. Typical applications include the locking and sealing of large bolts and studs (M25 and larger).

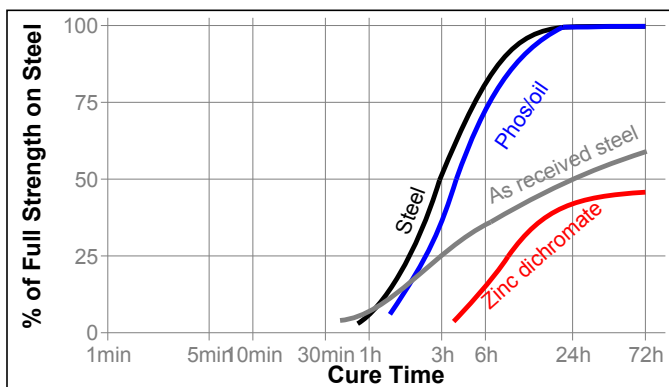
## TYPICAL PROPERTIES OF UNCURED MATERIAL

|   |                                |
|---|--------------------------------|
| Specific Gravity @ 25 °C                        | 1.11                           |
| Flash Point - See SDS                           |                                |
| Viscosity, Brookfield - RVT, 25 °C, mPa·s (cP): |                                |
| Spindle 4, speed 20 rpm,                        | 4,000 to 15,000 <sup>LMS</sup> |

## TYPICAL CURING PERFORMANCE

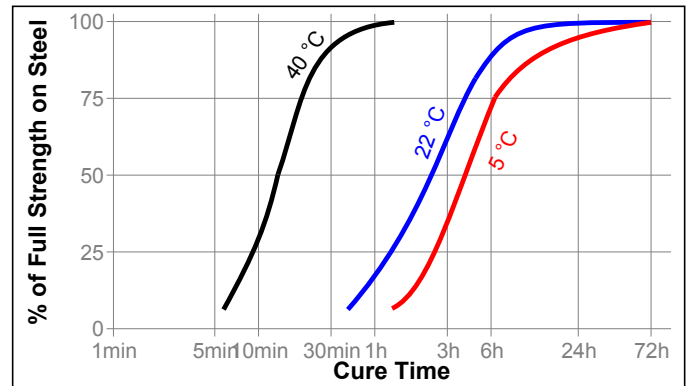
### Cure Speed vs. Substrate

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.



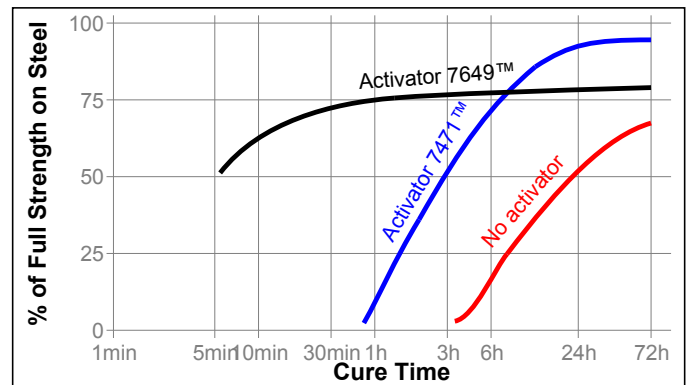
### Cure Speed vs. Temperature

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 7471<sup>™</sup> and 7649<sup>™</sup> and tested according to ISO 10964.



**TYPICAL PROPERTIES OF CURED MATERIAL****Physical Properties:**

|  |                     |
|--|---------------------|
| Coefficient of Thermal Expansion, ISO 11359-2, K <sup>-1</sup> | 80×10 <sup>-6</sup> |
| Coefficient of Thermal Conductivity, ISO 8302, W/(m·K)         | 0.1                 |
| Specific Heat, kJ/(kg·K)                                       | 0.3                 |

**TYPICAL PERFORMANCE OF CURED MATERIAL****Adhesive Properties**

After 24 hours @ 22 °C

Breakaway Torque, ISO 10964:

|   |          |                    |
|---|----------|--------------------|
| M10 steel nuts and bolts                          | N·m      | 23                 |
|   | (lb.in.) | (200)              |
| 3/8 x 16 steel nuts (grade 2) and bolts (grade 5) | N·m      | ≥18 <sup>LMS</sup> |
|   | (lb.in.) | (≥159)             |

Prevail Torque, ISO 10964:

|   |          |                    |
|---|----------|--------------------|
| M10 steel nuts and bolts                          | N·m      | 25                 |
|   | (lb.in.) | (220)              |
| 3/8 x 16 steel nuts (grade 2) and bolts (grade 5) | N·m      | ≥18 <sup>LMS</sup> |
|   | (lb.in.) | (≥159)             |

Compressive Shear Strength, ISO 10123:

|                        |                   |                      |
|------------------------|-------------------|----------------------|
| Steel pins and collars | N/mm <sup>2</sup> | ≥14.5 <sup>LMS</sup> |
|                        | (psi)             | (≥2,102)             |

Cured for 24 hours @ 22 °C followed by 72 hours @ 200 °C, tested @ 200 °C

Compressive Shear Strength, ISO 10123:

|                        |                   |                    |
|------------------------|-------------------|--------------------|
| Steel pins and collars | N/mm <sup>2</sup> | ≥20 <sup>LMS</sup> |
|                        | (psi)             | (≥2,900)           |

**TYPICAL ENVIRONMENTAL RESISTANCE**

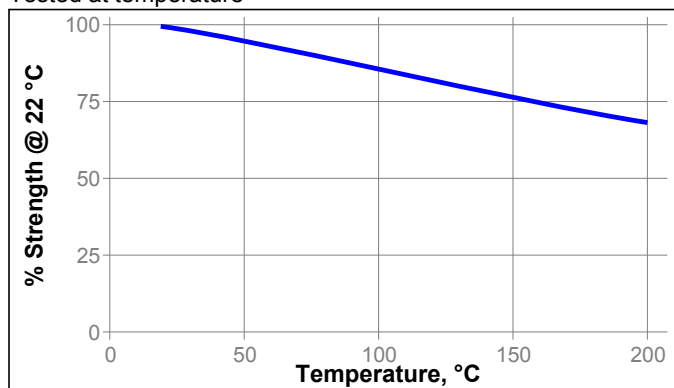
Cured for 24 hours @ 22 °C

Breakaway Torque, ISO 10964:

M10 steel nuts and bolts

**Hot Strength**

Tested at temperature

**Chemical/Solvent Resistance**

Aged under conditions indicated and tested @ 22°C.

| Environment             | °C | % of initial strength |  |
|-------------------------|----|-----------------------|--|
|                         |    | 720 h                 |  |
| Air reference           | 87 | 100                   |  |
| Motor oil (MIL-L-46152) | 87 | 62                    |  |
| Gasoline                | 87 | 62                    |  |
| Water                   | 87 | 58                    |  |
| Processing Temperature  | 87 | 87                    |  |
| Toluene                 | 87 | 80                    |  |
| Phosphate ester         | 87 | 70                    |  |

**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**

- For best results, clean all surfaces (external and internal) with a LOCTITE® cleaning solvent and allow to dry.
- 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.
- To prevent the product from clogging in the nozzle, do not allow the tip to touch metal surfaces during application.
- For Thru Holes**, apply several drops of the product onto the bolt at the nut engagement area.
- For Blind Holes**, apply several drops of the product down the internal threads to the bottom of the hole.
- 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.
- Assemble and tighten as required.

**For Disassembly**

- Apply localized heat to nut or bolt to approximately 250 °C. Disassemble while hot.

**For Cleanup**

- Cured product can be removed by soaking in a Loctite® solvent, e.g. Loctite® 7200 and mechanical removal with



a soft scraper. Avoid formation of dust and aerosols. Complete the cleaning process by wiping with a soft cloth dampened with Loctite® Cleaner, e.g. Loctite® 7063 or Loctite® ODC-free cleaner.

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

LMS dated February 14, 2000. 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

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$   
 kV/mm x 25.4 = V/mil  
 mm / 25.4 = inches  
 $\mu\text{m} / 25.4 = \text{mil}$   
 N x 0.225 = lb  
 N/mm x 5.71 = lb/in  
 $\text{N}/\text{mm}^2 \times 145 = \text{psi}$   
 MPa x 145 = psi  
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$   
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$   
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$   
 mPa·s = 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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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. 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 1.4