



# LOCTITE<sup>®</sup> FREEZE AND RELEASE<sup>™</sup>

October 2007

## PRODUCT DESCRIPTION

LOCTITE<sup>®</sup> FREEZE AND RELEASE<sup>™</sup> provides the following product characteristics:

<b>Technology</b>	Lubricant
<b>Chemical Type</b>	Mineral Oil
<b>Appearance</b>	Clear light <sup>LMS</sup>
<b>Cure</b>	Not applicable
<b>Application</b>	Rust treatment
<b>Dispense Method</b>	Spray
<b>Key Substrates</b>	Metals

LOCTITE<sup>®</sup> FREEZE AND RELEASE<sup>™</sup> is a special mineral oil formulation to free rusted, corroded and seized parts. The shock-freezing effect will cool parts instantly down to -43 °C and cause microscopic cracks in the layer of rust. This allows the lubricating ingredients to wick directly into the rust by capillary action. Released parts remain lubricated and protected from corrosion.

## TYPICAL PROPERTIES

Density @ 20 °C, g/ml	0.73 to 0.75 <sup>LMS</sup>
Maximum chill down, °C	-43
Viscosity, Cone & Plate, 25 °C, mPa·s (cP): Cone CP50-1 @ shear rate 3,000 s <sup>-1</sup>	1

## 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).**

## Handling precautions

Pressurised container. Protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use. Do not spray on an open flame or any incandescent material. Keep away from sources of ignition.

## Directions for use

1. Remove dirt and loose rust from parts.
2. Shake can thoroughly. Spray at a distance of about 10 to 15 cm onto the fastener to be treated for 5 to 10 seconds.
3. Allow the product to react for 1 to 2 minutes, before attempting to release the seized part.
4. Repeat application if necessary.

## Storage

The product is classified as flammable and must be stored in an appropriate manner in compliance with relevant regulations. Do not store near oxidizing agents or combustible materials. Store product in the unopened container in a dry location. Storage information may also be indicated on the product container labelling

**Optimal Storage: 2 °C to 8 °C. Storage below 2 °C or greater than 8 °C can adversely affect product properties.**

Henkel 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

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

LMS dated November 11, 2006. 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.

## 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.

**Conversions**

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

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Reference 0.0