

LOCTITE® 962™

February 2016

PRODUCT DESCRIPTION

LOCTITE® 962™ provides the following product characteristics:

Technology	Acrylic
Chemical Type	Methacrylate ester
Appearance (uncured)	Opaque red liquid ^{LMS}
Fluorescence	Positive under UV light
Components	One component - requires no mixing
Viscosity	Thixotropic
Cure	Anaerobic
Secondary Cure	Activator
Application	Sealing
Strength	High

LOCTITE® 962™ is designed for sealing core plugs but is also applicable to many other high strength sealing applications where non-migration is desired. Typical applications include sealing and securing cylindrical metal assemblies, e.g. engine block cup and core plugs, water pump seals, and hub and shaft assemblies. The thixotropic nature of LOCTITE® 962™ reduces the migration of liquid product after application to the substrate.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 27 °C	1.05
Flash Point - See SDS	
Viscosity, Brookfield - RVT, 25 °C, mPa·s (cP):	
Spindle 3, speed 2.5 rpm	4,000 to 13,000 ^{LMS}
Spindle 3, speed 20 rpm	1,400 to 3,500 ^{LMS}

TYPICAL CURING PERFORMANCE

Fixture Time

Fixture time is defined as the time to develop a shear strength of 0.1 N/mm².

Fixture Time, minute	30
----------------------	----

TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

Cured for 1 hour @ 22 °C

Compressive Shear Strength, ISO 10123:

Steel pins and collars	N/mm ²	6.9
	(psi)	(1,000)

Cured for 6 hours @ 22 °C

Breakaway Torque, ISO 10964:

3/8 x 16 steel nuts (grade 2) and bolts (grade 5)	N·m	11.3 to 27.1 ^{LMS}
	(lb.in.)	(100 to 240)

Prevail Torque, ISO 10964:

3/8 x 16 steel nuts (grade 2) and bolts (grade 5)	N·m	8.5 to 25.4 ^{LMS}
	(lb.in.)	(75 to 225)

Cured for 24 hours @ 22 °C

Breakaway Torque, ISO 10964:

3/8 x 16 steel nuts (grade 2) and bolts (grade 5)	N·m	14.1 to 28.3 ^{LMS}
	(lb.in.)	(125 to 250)

Prevail Torque, ISO 10964:

3/8 x 16 steel nuts (grade 2) and bolts (grade 5)	N·m	11.3 to 29.9 ^{LMS}
	(lb.in.)	(100 to 265)

Compressive Shear Strength, ISO 10123:

Steel pins and collars	N/mm ²	≥10.0 ^{LMS}
	(psi)	(≥1,450)

Cured for 1 week @ 22 °C

Compressive Shear Strength, ISO 10123:

Steel pins and collars	N/mm ²	13.8
	(psi)	(2,000)

TYPICAL ENVIRONMENTAL RESISTANCE

Cured for 1 week @ 22 °C

Hot Strength

Tested at 88 °C

Compressive Shear Strength, ISO 10123:

Steel pins and collars	N/mm ²	13.8
	(psi)	(2,000)

Heat Aging

Heat aged for 120 hours @ 121°C, tested @ 22 °C

Compressive Shear Strength, ISO 10123:

Steel pins and collars	N/mm ²	13.8
	(psi)	(2,000)

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:

1. For best performance bond surfaces should be clean and free from grease.
2. Shake the product thoroughly before use.
3. Apply LOCTITE® 962™ to both parts to assure sufficient coverage.
4. Parts must be closely-fitted metal surfaces in order to assure effective sealing and bonding of the assembly.
5. Assemble parts in accordance with standard practice.
6. LOCTITE® 962™ cures in 2 hours on activated parts. Allow 24 hours on unactivated parts.

Loctite Material Specification^{LMS}

LMS dated March 27, 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

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

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.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:

In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

In case products are delivered by Henkel Colombiana, S.A.S. the following disclaimer is applicable:

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.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Corporation, Resin Technology Group, Inc., or Henkel Canada Corporation, the following disclaimer is applicable:

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

Except as otherwise noted, all trademarks in this document are trademarks of Henkel Corporation in the U.S. and elsewhere. ® denotes a trademark registered in the U.S. Patent and Trademark Office.

Reference 1.3

Henkel Americas
+860.571.5100

Henkel Europe
+49.89.320800.1800

Henkel Asia Pacific
+86.21.2891.8859

For the most direct access to local sales and technical support visit: www.henkel.com/industrial