Technical Data Sheet

LOCTITE® 576™

February 2005

PRODUCT DESCRIPTION

LOCTITE® 576™ provides the following product characteristics:

Technology	Acrylic
Chemical Type	Dimethacrylate ester
Appearance (uncured)	Brown liquid[LMS]
Fluorescence	Negative
Odor	Low
Components	One component - requires no mixing
Viscosity	Medium
Cure	Anaerobic
Secondary Cure	Activator
Application	Thread sealing
Strength	Low
Maximum Gap	0.2 mm

LOCTITE® 576™ is designed for the locking and sealing of threaded fasteners which require normal disassembly with standard hand tools. The product cures when confined in the absence of air between close fitting surfaces and prevents loosening and leakage from shock and vibration.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Density @ 25 °C, g/ml	1.1
pH @ °C	>7
Corrosion characteristics : (MIL-S-22473)	None
Flash Point - See SDS	
Viscosity, Brookfield - RVT, 25 °C, mPa·s (cP):	
Spindle 4, speed 20 rpm	4,000 to 6,000[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, ISO 4587, minutes

Steel	120
Steel, activated with Activator 7471™	20
Steel, activated with Activator 7649™	20

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties:

Coefficient of Thermal Expansion, ISO 11359-1, K^{-1}	100×10^{-6}
Coefficient of Thermal Conductivity ISO 8302, W/(m·K)	0.2
Specific Heat, kJ/(kg·K)	1.5
Water Absorption, %	<1

Electrical Properties:

Volume Resistivity, IEC 60093, Ω·cm	1×10^{15}
Dielectric Constant, IEC 60250	4

TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

Cured for 24 hours @ 23 °C

Breakaway Torque, ISO 10964:		
M10 black oxide nuts and bolts	N·m (lb.in.)	2 to 8[LMS] (17.7 to 70.8)
Prevail Torque, ISO 10964:		
M10 black oxide nuts and bolts	N·m (lb.in.)	1 to 6[LMS] (8.9 to 53.1)

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

For safe handling information on this product, consult the Safety Data Sheet (SDS).

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 LOCTITE® SF 7471™ or LOCTITE® SF 7649™ and allow to dry.
3. 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.
4. Using compliant practices, assemble and wrench tighten

fittings in accordance with manufacturers recommendations.

5. Properly tightened fittings will seal instantly to moderate pressures. For maximum pressure resistance and solvent resistance allow the product to cure a minimum of 24 hours.

For Disassembly

1. Remove with standard hand tools.
2. Where hand tools do not work because of excessive engagement length or large diameters (over 25 mm), 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.

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.

Loctite Material Specification[LMS]

LMS dated September 18, 1999. 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.

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 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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Reference 1

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