LOCTITE® 2760™

January 2009

PRODUCT DESCRIPTION

LOCTITE® 2760™ provides the following product characteristics:

Technology	Acrylic
Chemical Type	Dimethacrylate ester
Appearance (uncured)	Red homogeneous liquid[LMS]
Fluorescence	Positive under UV light[LMS]
Components	One component - requires no mixing
Viscosity	Medium, thixotropic
Cure	Anaerobic
Secondary Cure	Activator
Application	Threadlocking
Strength	High

LOCTITE® 2760™ cures when confined in the absence of air between close fitting metal surfaces and prevents loosening and leakage from shock and vibration. LOCTITE® 2760™ is particularly fast curing thereby reducing or eliminating the need for activators. Particularly suited for heavy duty applications such as bolts used in transmissions, construction equipment or railroad assemblies where heavy shock and stress levels are required. The thixotropic nature of LOCTITE® 2760™ reduces the migration of liquid product after application to the substrate.

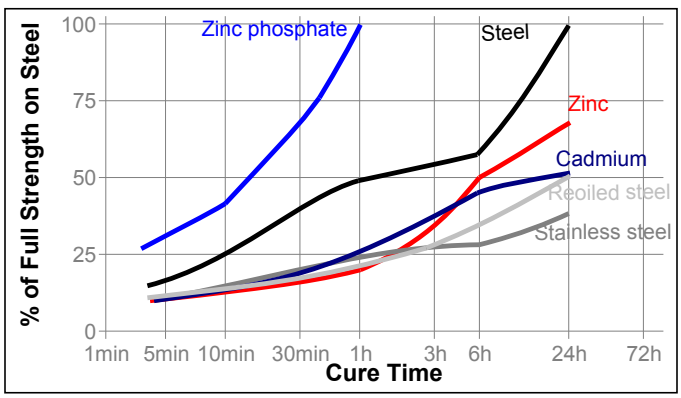
TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C	1.15
Flash Point - See MSDS	
Viscosity, Brookfield - RVT, 25 °C, mPa·s (cP):	
Spindle 3, speed 20 rpm	1,250 to 4,250[LMS]

TYPICAL CURING PERFORMANCE

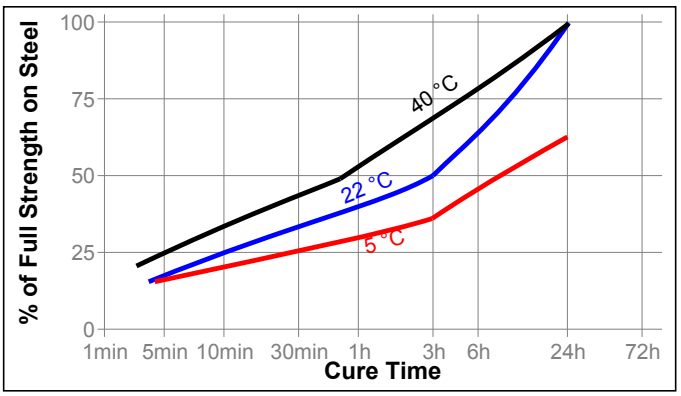
Cure Speed vs. Substrate

The rate of cure will depend on the substrate used. The graph below shows the breakloose strength developed with time on 3/8 x 16 steel nuts & bolts compared to different materials and tested according to ISO 10964. All samples pre-torqued to 5 N·m.



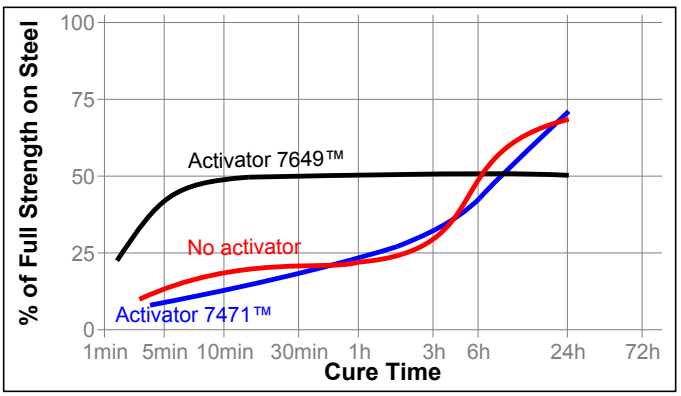
Cure Speed vs. Temperature

The rate of cure will depend on the temperature. The graph below shows the breakloose strength developed with time at different temperatures on 3/8 x 16 steel nuts & bolts and tested according to ISO 10964. All samples pre-torqued to 5 N·m.



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 breakloose strength developed with time using Activator 7471™ and 7649™ on 3/8 x 16 zinc dichromate steel nuts and bolts and tested according to ISO 10964. All samples pre-torqued to 5 N·m.



TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

After 4 hours @ 22 °C

Breakaway Torque, ISO 10964:		
3/8 x 16 steel nuts (grade 2) and bolts (grade 5)	N·m (lb.in.)	≥8[LMS] (≥70)
Prevail Torque, ISO 10964:		
3/8 x 16 steel nuts (grade 2) and bolts (grade 5)	N·m (lb.in.)	≥10.1[LMS] (≥90)

After 24 hours @ 22 °C

Breakaway Torque, ISO 10964:

3/8 x 16 steel nuts (grade 2) and bolts (grade 5)	N·m (lb.in.)	≥11.3[LMS] (≥100)

Prevail Torque, ISO 10964:

3/8 x 16 steel nuts (grade 2) and bolts (grade 5)	N·m (lb.in.)	≥14.1[LMS] (≥125)

Breakloose Torque, ISO 10964, Pre-torqued to 5 N·m:

3/8 x 16 steel nuts (grade 2) and bolts (grade 5)	N·m (lb.in.)	36.7 (325)

Max. Prevail Torque, ISO 10964, Pre-torqued to 5 N·m:

3/8 x 16 steel nuts (grade 2) and bolts (grade 5)	N·m (lb.in.)	36.1 (320)

TYPICAL ENVIRONMENTAL RESISTANCE

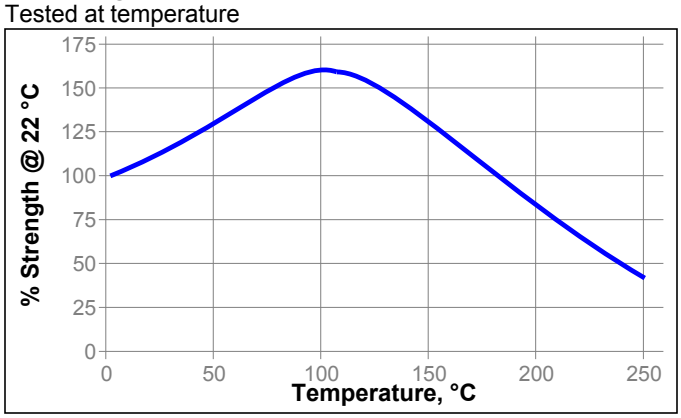
Cured for 24 hours @ 22 °C

Breakloose Torque, ISO 10964, Pre-torqued to 5 N·m:

3/8 x 16 zinc phosphate nuts and bolts

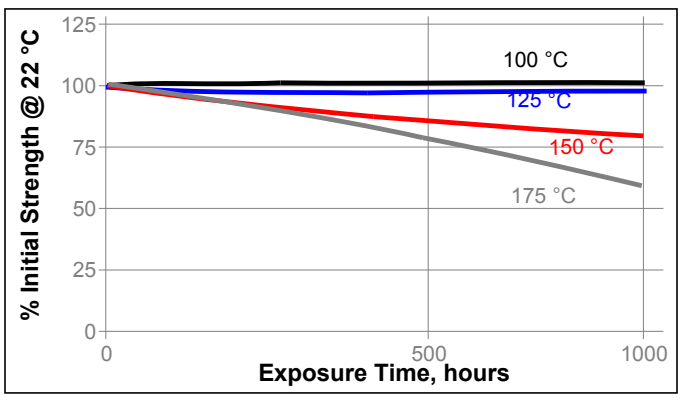
Hot Strength

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**	**1000 h**
Motor oil (MIL-L-46152)	125	95
Gasoline	22	100
Brake fluid	22	100
Water/glycol 50/50	87	100
Ethanol	22	100
Acetone	22	100

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 Assembly

1. For best results, clean all surfaces (external and internal) with a LOCTITE® cleaning solvent and allow to dry.
2. If the cure speed is too slow, spray all threads with Activator 7471™ or 7649™ and allow to dry.
3. Shake the product thoroughly before use.
4. To prevent the product from clogging in the nozzle, do not allow the tip to touch metal surfaces during application.
5. **For Thru Holes**, apply several drops of the product onto the bolt at the nut engagement area.
6. **For Blind Holes**, apply several drops of the product down the internal threads to the bottom of the hole.
7. **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 thouroughly fill the voids. For bigger threads and voids, adjust product amount accordingly and apply a 360° bead of product on the female threads also.
8. Assemble and tighten as required.

For Disassembly

1. Remove with standard hand tools.
2. In rare instances where hand tools do not work because of excessive engagement length, apply localized heat to nut or bolt 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 November 10, 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.

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

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Trademark usage

Reference 1.1