



# LOCTITE<sup>®</sup> 2423<sup>™</sup>

May 2008

## PRODUCT DESCRIPTION

LOCTITE<sup>®</sup> 2423<sup>™</sup> provides the following product characteristics:

<b>Technology</b>	Acrylic
<b>Chemical Type</b>	Dimethacrylate ester
<b>Appearance (uncured)</b>	Blue liquid <sup>LMS</sup>
<b>Fluorescence</b>	Positive <sup>LMS</sup>
<b>Components</b>	One component - requires no mixing
<b>Viscosity</b>	Medium, thixotropic
<b>Cure</b>	Anaerobic
<b>Secondary Cure</b>	Activator
<b>Application</b>	Threadlocking
<b>Strength</b>	Medium

LOCTITE<sup>®</sup> 2423<sup>™</sup> 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 metal surfaces and prevents loosening and leakage from shock and vibration. Particularly suitable for applications on less active substrates such as plated surfaces, where disassembly with hand tools is required for servicing. LOCTITE<sup>®</sup> 2423<sup>™</sup> was designed to have extremely low odor.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

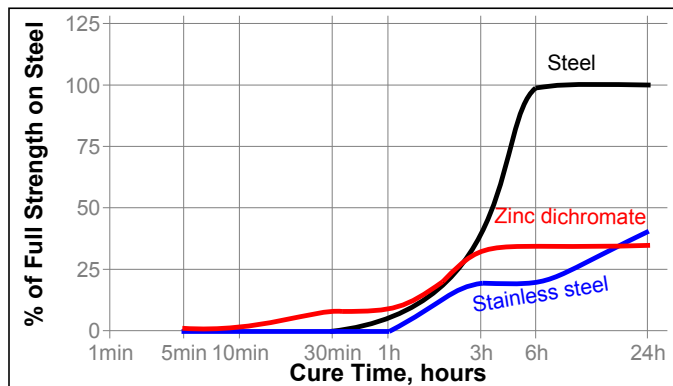
Specific Gravity @ 25 °C	1.08
Viscosity, Brookfield - RVF, 25 °C, mPa·s (cP):	
Spindle 3, speed 20 rpm, Helipath	600 to 2,000 <sup>LMS</sup>

Flash Point - See MSDS

## TYPICAL CURING PERFORMANCE

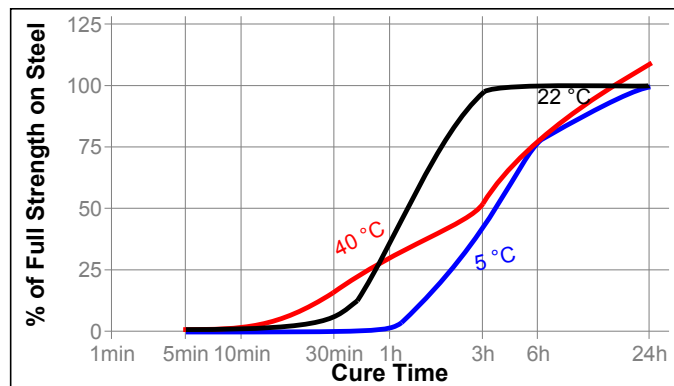
### Cure Speed vs. Substrate

The rate of cure will depend on the substrate used. The graph below shows the breakaway strength developed with time on 3/8 x 16 steel nuts & bolts compared to different materials and tested according to ISO 10964.



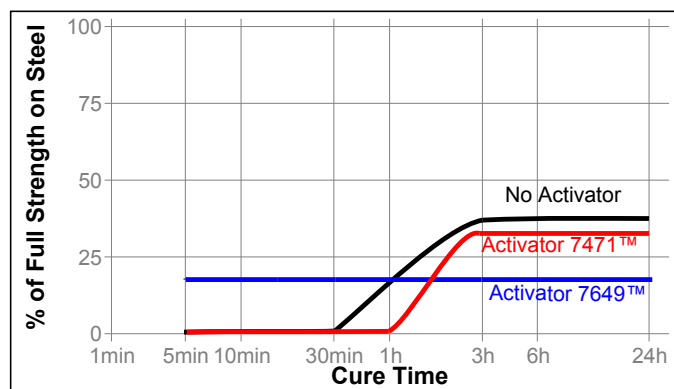
### Cure Speed vs. Temperature

The rate of cure will depend on the temperature. The graph below shows the breakaway strength developed with time at different temperatures on 3/8 x 16 steel nuts & 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 3/8 x 16 zinc dichromate nuts and bolts using Activator 7471<sup>™</sup> and Activator 7649<sup>™</sup> and tested according to .



## TYPICAL PERFORMANCE OF CURED MATERIAL

### Adhesive Properties

After 24 hours @ 22 °C

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

3/8 x 16 steel nuts and bolts (grade 5) (degreased)	N·m	≥8.0 <sup>LMS</sup>
	(lb.in.)	(≥71)

Breakaway Torque, ISO 10964:

3/8 x 16 steel nuts and bolts (degreased)	N·m	10 to 13
	(lb.in.)	(88 to 116)

**Prevail Torque, ISO 10964:**

3/8 x 16 steel nuts and bolts (degreased)	N·m (lb.in.)	1.8 to 2.4 (15 to 21)
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**Breakloose Torque, ISO 10964, Pre-torqued to 5 N·m:**

3/8 x 16 zinc phosphate & oil nuts and bolts	N·m (lb.in.)	7.6 to 9.8 (67 to 87)
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**Prevail Torque, ISO 10964, Pre-torqued to 5 N·m:**

3/8 x 16 zinc phosphate & oil nuts and bolts	N·m (lb.in.)	2.4 to 4.3 (21 to 38)
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**TYPICAL ENVIRONMENTAL RESISTANCE**

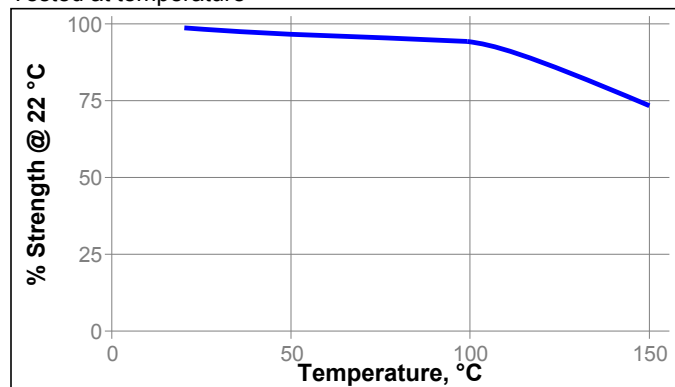
Cured for 1 week @ 22 °C

Breakloose Torque, ISO 10964:

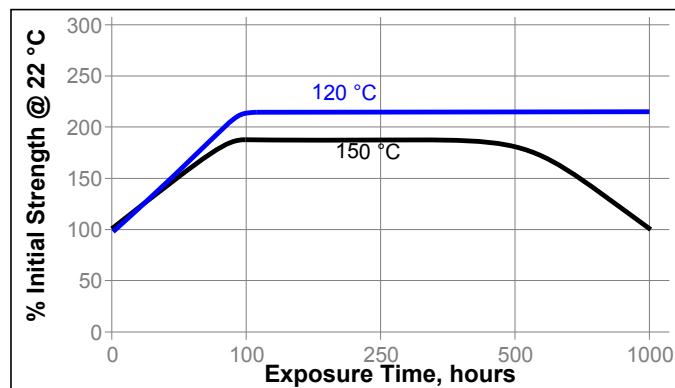
3/8 x 16 zinc phosphate &amp; oil nuts and bolts

**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.

Environment	°C	% of initial strength		
		100 h	500 h	1000 h
Motor oil	125	220	220	220
Gasoline (unleaded)	22	220	220	220
Water/glycol 50/50	87	190	190	190
Ethanol	22	180	250	250
Water	22	220	220	220

**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 material is an inactive metal or the cure speed is too slow, spray all threads with Activator 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 thru hole 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. For bigger threads and voids, adjust product amount accordingly.
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<sup>LMS</sup>**

LMS dated December 13, 2007. 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**

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Reference 0.1