



1001 Trout Brook Crossing
 Rocky Hill, CT 06067-3910
 Telephone: (860) 571-5100
 FAX: (860) 571-5465

Technical Data Sheet

Product 266

Industrial Version, August 2000

PRODUCT DESCRIPTION

LOCTITE® Product 266 is a single component, thixotropic surface insensitive, high strength and high temperature anaerobic threadlocking material. The product cures when confined in the absence of air between close fitting metal surfaces. Product 266 is tolerant of oil and other mild surface contamination.

TYPICAL APPLICATIONS

Prevents loosening and leakage of threaded fasteners. Particularly suitable for heavy duty applications such as bolts used in transmissions, construction equipment or railroad assemblies where resistance to heavy shock, vibration and stress levels is required along with exposure to elevated temperatures.

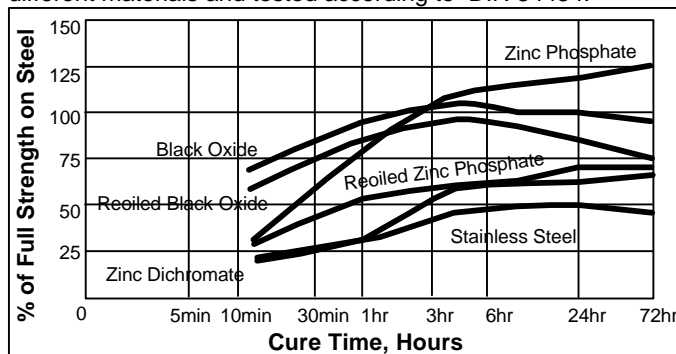
PROPERTIES OF UNCURED MATERIAL

	Value	Typical Range
Chemical Type	Dimethacrylate ester	
Appearance	Red - orange fluorescent liquid	
Specific Gravity @ 25°C	1.19	
Viscosity @ 25°C, mPa.s (cP)		
Brookfield RVF		
Spindle 3 @ 2 rpm	9,000	7,000 to 11,000
Spindle 3 @ 20 rpm	3,750	2,500 to 5,000
Flash Point (TCC), °C (°F)	>93 (>200)	

TYPICAL CURING PERFORMANCE

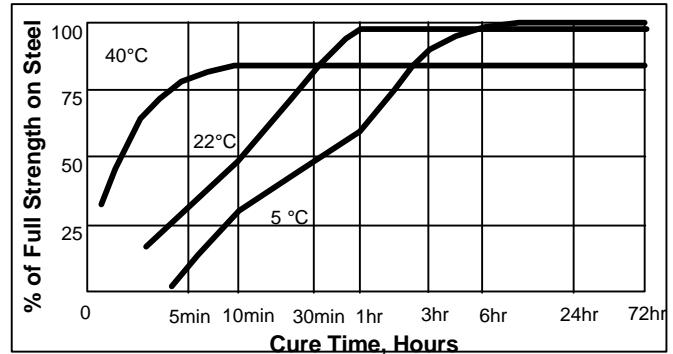
Cure speed vs. substrate

The rate of cure will depend on substrate used. The graph below shows the breakloose strength developed with time on M10 black oxide steel bolts and mild steel nuts, compared to different materials and tested according to DIN 54454.



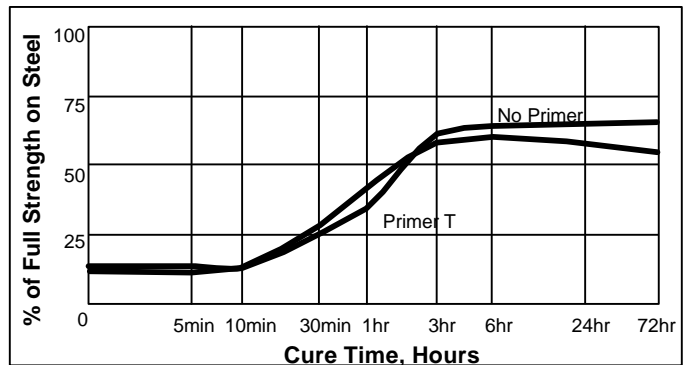
Cure speed vs. ambient temperature

The rate of cure will depend on the ambient temperature. The following graph shows the breakloose strength developed with time at different temperatures on M10 black oxide steel bolts and mild steel nuts, and tested according to DIN 54454.



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 breakloose strength developed with time using Activator T on M10 Zinc Dichromate steel nuts & bolts and tested according to DIN 54454.



PERFORMANCE OF CURED MATERIAL

(After 24 hr at 22°C on M10 black oxide steel bolts & mild steel nuts)

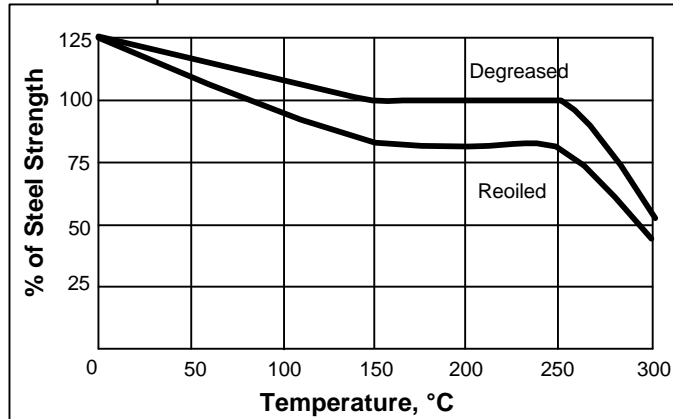
	Value	Typical Range
Breakaway Torque, ISO 10964, N.m (lb.in)	30 (270)	25 to 35 (225 to 300)
Prevail Torque, ISO 10964, N.m (lb.in)	9 (75)	6 to 11 (50 to 100)
Breakloose Torque, Pretorqued 5 N.m Din 54454 (44 lb.in)	33 (295)	25 to 35 (225 to 300)
Max. Prevail Torque, Pretorqued 5 N.m Din 54454 (44 lb.in)	9 (75)	6 to 11 (50 to 100)
Lubricity, ASTM 5648, K Factor	20	.16 .17
(As received 3/8x16 Phos. & oil bolts, lubricity steel nuts)	30	.16 .17
	40	.17 .18

TYPICAL ENVIRONMENTAL RESISTANCE

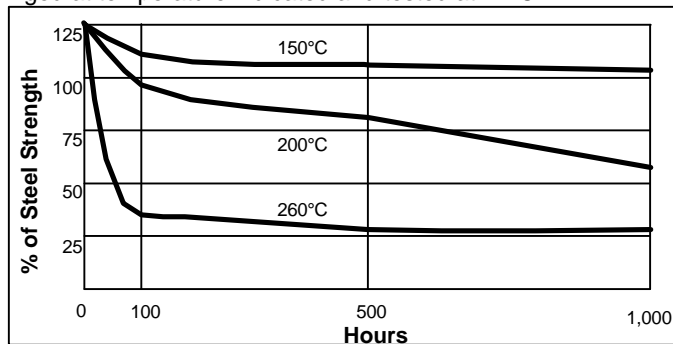
Test Procedure : Breakloose Torque, DIN 54454
 Substrate: M10 Zinc Phosphate Nuts & Bolts
 Cure procedure: 24 Hours at 22°C

Hot Strength

Tested at temperature.

**Heat Aging**

Aged at temperature indicated and tested at 22°C.

**Chemical / Solvent Resistance**

Aged under conditions indicated and tested at 22°C

Solvent	Temp.	% Initial Steel Strength retained at		
		100 hr	1000 hr	2000 hr
Motor Oil	125°C	122	125	122
Unleaded Gas	22°C	124	132	132
Break Fluid	22°C	129	142	141
Water/Glycol	87°C	129	139	141
ATF	125°C	117	117	115
Ethanol	22°C	119	122	130
Acetone	22°C	119	125	125

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

Although not required, best performance is obtained when surfaces are free of dirt and oil. Product should be applied to the bolt in sufficient quantity to fill all engaged threads. This product performs best in thin bond gaps (0.05 mm). Very large thread sizes may create larger gaps, affecting cure speed and ultimate bond strength. This product is designed to have neutral lubricating properties during assembly. More specifically, after the adhesive is applied the prescribed assembly torque will yield the same clamp force because the friction between the nut and bolt is not altered. In critical applications, this should be confirmed.

Storage

Product shall be ideally stored in a cool, dry location in unopened containers at a temperature between 8°C to 28°C (46°F to 82°F) unless otherwise labeled. Optimal storage is at the lower half of this temperature range. To prevent contamination of unused product, do not return any material to its original container. For further specific shelf life information, contact your local Technical Service Center.

Data Ranges

The data contained herein may be reported as a typical value and/or range. Values are based on actual test data and are verified on a periodic basis.

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, **Loctite Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Loctite Corporation's products. Loctite 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 Loctite 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.