243 Blue Threadlocker

Overview:

Threadlocking Adhesive - medium strength. General purpose. Suitable for all metal threaded assemblies.

LOCTITE® 243 Blue Threadlocker is a general purpose threadlocker of medium bond strength. This threadlocker secures and seal bolts, nuts and studs to prevent loosening due to vibration. The product works on all metals, including passive substrates such as stainless steel, aluminium and plated surfaces. It is proven to be tolerant of minor contamination due to industrial oils, e.g. motor oils, corrosion prevention oils and cutting fluid.

- **Prevents loosening on vibrating assemblies, e.g. pumps, gear boxes or presses**
- **Works on all metals, including passive substrates (e.g. stainless steel, aluminium, plated surfaces)**
- **Proven to tolerate minor contamination by industrial oils, e.g. motor oils, corrosion prevention oils and cutting fluids**
- **Permits disassembly with hand tools for servicing**
- **P1 NSF Reg. No.: 123000**

Technical Data - LOCTITE 243 Blue Threadlocker	
Approval / Specification	NSF P1 Reg No: 123000
Colour	Blue
Fixture Time	5 to 10 minutes
Full Cure Temperature	25C
Key Characteristics	Thixotropic
Specific Gravity Temperature	25C
Substrates	Brass, Steel, Stainless Steel
Operating Temperature	-54C to +182C
Thread Size (Maximum)	R19 mm
Torque Break on M10 Steel	265cm/Kg
Torque Prevail on M10 Steel	46.2cm/Kg
Viscosity	1300 – 3000
Viscosity Temperature	25C

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 material.

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

Where aqueous washing systems are used to clean the surface s 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 can result). Users are recommended to confirm compatibility of the product of such substrates.

Directions for use:

For Assembly:

1. For the best results, clean all surfaces (external and internal) with Loctite cleaning solvent or *the patented non-toxic nor carcinogen CB7™ solvent* and allow to dry
2. If the cure speed is too slow, use the appropriate activator. Please see the Cure Speed vs. Activator graph for reference. Allow the activator to dry when needed
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 Through 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 to the lower third of the internal threads in the blind hole, of the bottom of the blind 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 thoroughly fill the voids. For bigger threads and voids, also adjust product amount accordingly and apply a 360° bead of product on the female threads.
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

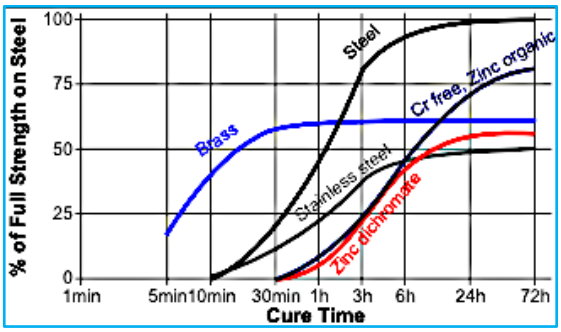
TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25°C	1.08
Flash Point	See SDS
Viscosity, Brookfield – RVT, 25°C, mPas (cP):	
Spindle 3, speed 20 rpm	1,300 to 3000LMS
Viscosity, Cone & Plate, 25°C, mPas (cP):	
Cone 35/2*Ti @ shear rate 129 s^{-1}	350

TYPICAL CURING PERFORMANCE

Cure Speed vs. Substrate

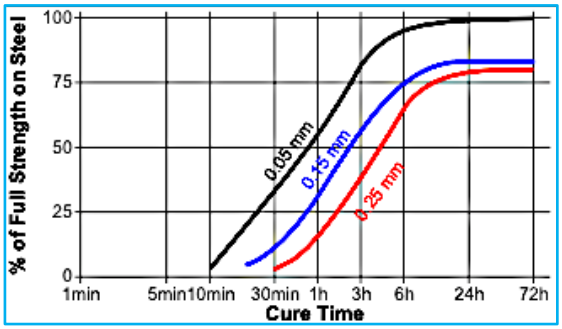
The rate of cure will depend on the substrate used. The graph below shows the breakaway strength developed with time on M10 steel bolts and nuts compared to different materials and tested to ISO 10964



Cure Speed vs. Bond Gap

The rate of cure will depend on the bondline gap. Gaps in threaded fasteners depends on thread type, quality and size

The following graph shows shear strength developed with time on steel pins and collars at different controlled gaps and tested according to ISO 10123



Chemical / Solvent Resistance Aged under conditions indicated and tested @ 22°C				
		% of initial strength		
Environment	°C	500 H	1000 H	5000 H
Motor oil	125	110	115	115
Unleaded gasoline	22	100	95	100
Brake fluid	22	105	110	125
Water / glycol	87	120	125	130
Acetone	22	85	85	80
Ethanol	22	95	90	90
E85 Ethanol fuel	22	95	100	95
B100 Bio-Diesel	22	110	110	125
DEF (AdBlue®)	22	61	59	70

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