

PRODUCT DESCRIPTION

Higlue 242 provides the following product characteristics:

Technology	Acrylic
Chemical Type	Dimethacrylate ester
Appearance (uncured)	Blue 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	Medium

Higlue 242 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. Suitable for applications on less active substrates such as plated surfaces, where disassembly with hand tools is required for servicing. The thixotropic nature of Higlue 242 reduces the migration of liquid product after application to the substrate.

TYPICAL PROPERTIES OF UNCURED MATERIAL

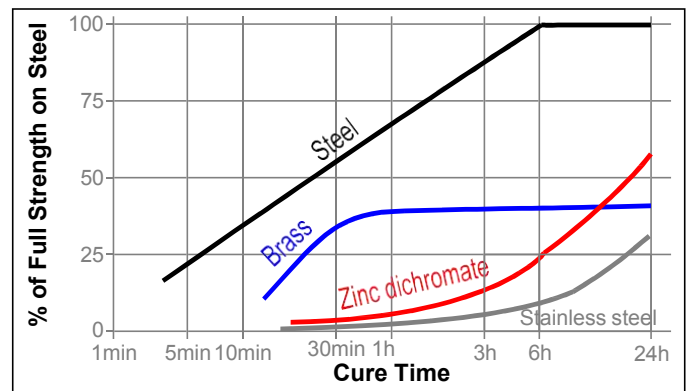
- Specific Gravity @ 25 °C 1.0
- Flash Point - See SDS
- Viscosity, Brookfield - RVF, 25 °C, mPa·s (cP):
 - Spindle 3, speed 2 rpm, Helipath ≥5,000^{LMS}
 - Spindle 3, speed 20rpm, Helipath 800 to 1,600^{LMS}
- Viscosity, Brookfield - RVT, 25 °C, mPa·s (cP):
 - Spindle 3, speed 20 rpm, *900 to 1,400^{LMS}
- Lubricity, ASTM D5648, K value, ASTM D 5648, %:
 - 3/8 x 16 Phosphate & Oil Nuts, Bolts, Steel -10 to 10^{LMS}
 - Washer

(In critical applications, it is necessary to determine the K values independently. Higlue makes no warranty of specific performance on any individual fastener)

TYPICAL CURING PERFORMANCE

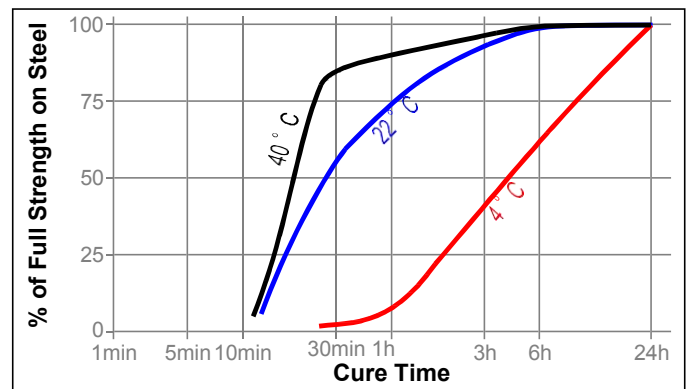
Cure Speed vs. Substrate

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



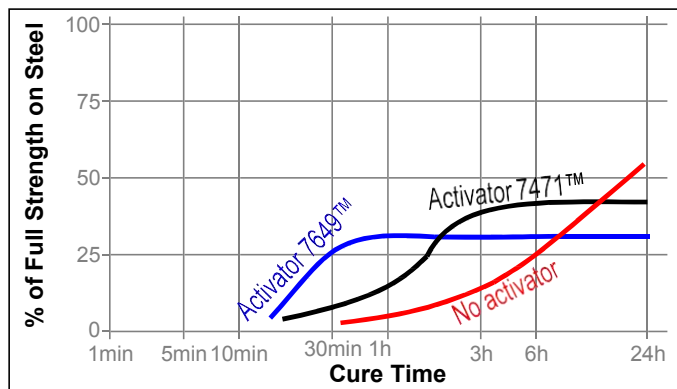
Cure Speed vs. Temperature

The rate of cure will depend on the temperature. The graph below shows the breakaway strength developed with time at different temperatures on M10 steel nuts and 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 M10 zinc dichromate steel nuts and bolts using Activator 7471™ and 7649™ and tested according to ISO 10964.



TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

After 1 hour @ 22 °C

Breakaway Torque, ISO 10964:

3/8 x 16 steel nuts (grade 2) and bolts (grade 5) N·m 5.6 to 17^{LMS}
 (lb.in.) (50 to 150)

Prevail Torque, ISO 10964:

3/8 x 16 steel nuts (grade 2) and bolts (grade 5) N·m 1.7 to 6.8^{LMS}
 (lb.in.) (15 to 60)

After 24 hours @ 22 °C

Breakaway Torque, ISO 10964:

3/8 x 16 steel nuts (grade 2) and bolts (grade 5) N·m 7.9 to 17^{LMS}
 (lb.in.) (70 to 150)

3/8 x 16 cadmium nuts and bolts N·m 1.1 to 6.8^{LMS}
 (lb.in.) (10 to 60)

3/8 x 16 zinc nuts and bolts N·m 2.3 to 6.8^{LMS}
 (lb.in.) (20 to 60)

M10 black oxide steel nuts and bolts N·m *8 to 19^{LMS}
 (lb.in.) (71 to 168)

3/8 x 16 cadmium nuts and bolts N·m 0.5 to 4.5^{LMS}
 (lb.in.) (4 to 40)

3/8 x 16 zinc nuts and bolts N·m 1.1 to 4.5^{LMS}
 (lb.in.) (10 to 40)

TYPICAL ENVIRONMENTAL RESISTANCE

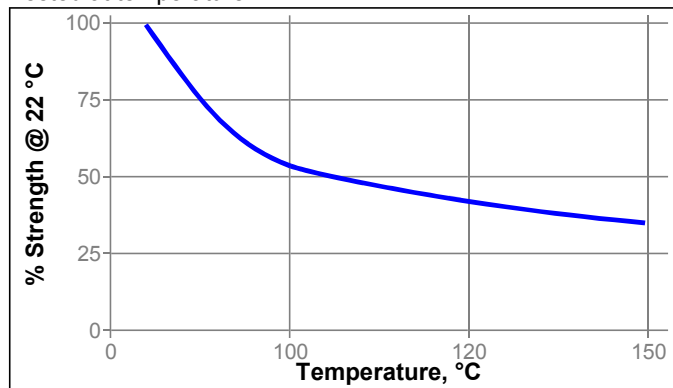
Cured for 24 hours @ 22 °C

Breakloose Torque, ISO 10964:

M10 steel nuts and bolts

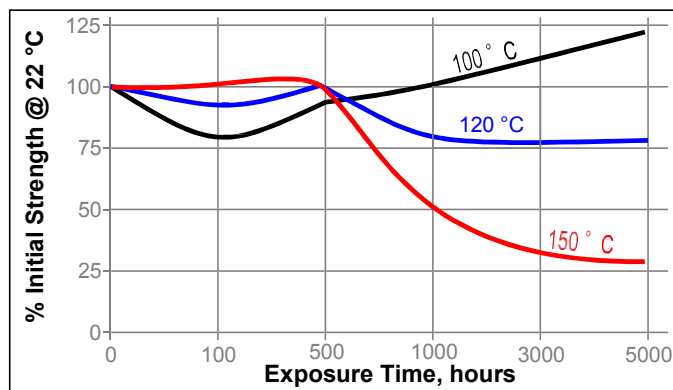
Hot Strength

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 (MIL-L-46152)	125	100	100	100
Unleaded gasoline	22	100	100	95
Leaded Gasoline I	22	100	100	100
Brake fluid	22	100	100	100
Ethanol	22	100	100	95
Acetone	22	100	100	85
1,1,1 Trichloroethane	22	100	100	90
Water/glycol 50/50	87	80	75	70
DEF (AdBlue®)	22		105	95

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.