TECHNICAL DATA SHEET
My-T-Lok® 313
Low Strength Screw Locker
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(An ISO 9001 Certified Company)
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Product Description

My-T-Lok® 313 is designed for general purpose locking and sealing of threaded fasteners which require easy disassembly with standard hand tools. My-T-Lok® 313 cures, when confined in the absence of air between close fitting metal surfaces, and prevents loosening and leakage from shock and vibration. The thixotropic nature reduces the migration of liquid product after application to the substrate.

Applications:

- Suitable for adjustment of set screws, small diameter or long engagement length fasteners, where easy disassembly is required without shearing the screw.
- Lock Screw and seal nuts, bolts, and studs in a wide variety of applications where easy removal or adjustment is necessary.

Properties

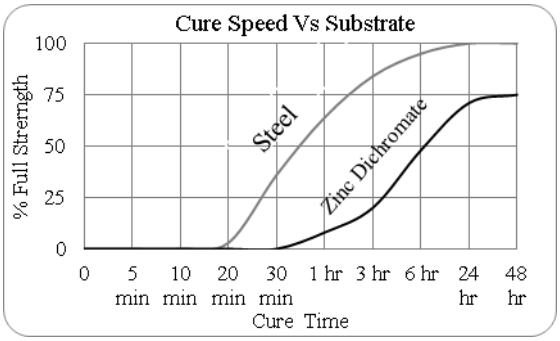
Technology	:	Acrylic
Chemical Type	:	Dimethacrylate ester
Components	:	One component
Appearance	:	Purple
Specific Gravity @ 25°C	:	1.05
Viscosity @ 25±2 °C, Brookfield, Spindle #3, Speed 2.5 r.p.m.	:	≥ 3,500cP
Spindle #3, Speed 20 r.p.m.	:	900 - 1700 cP
Cure	:	Anaerobic
Secondary Cure	:	Activator
Strength	:	Low
Service Temperature	:	-50 ^{0}C to 150 ^{0}C
Application	:	Thread locker

Curing Performance

The product cures when confined in the absence of air between closed fitting metal surfaces. Although functional strength is developed in a relatively short time, curing continues for at least 24 hours before full chemical / solvent resistance is developed.

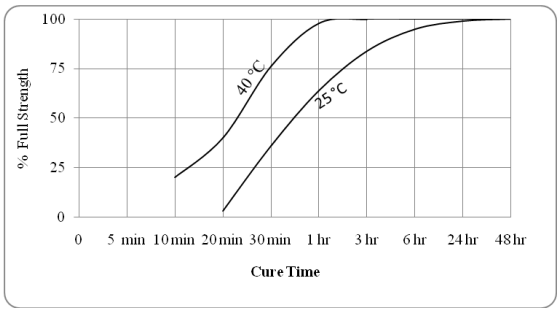
Cure Speed vs. Substrate

The rate of cure will depend on the substrate used. The graph below shows the breakaway strength developed with time on M10 phosphated steel nuts and bolts compared to different materials and tested according to BIS 13055:1991.



Cure Speed vs. Temperature

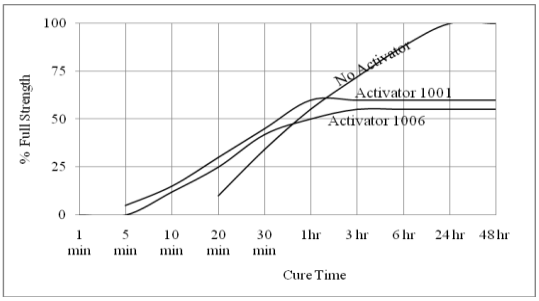
The rate of cure will depend on the ambient temperature. The graph below shows the breakaway strength developed with time on M10 phosphated steel nuts and bolts at different temperatures and tested according to BIS 13055:1991.



Cure Speed vs. Activator

Where cure speed is unacceptably long due to large gaps, applying activator to the surface will improve cure speed. However, this can trim down ultimate strength of the bond and therefore testing is recommended to confirm effect.

The graph below shows the breakaway strength developed with time on M10 Zinc plated steel nuts and bolts using different activators and tested according to BIS 13055:1991.



Adhesive Properties of Cured Material

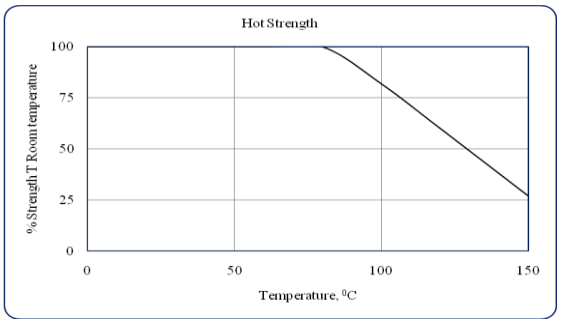
Compressive Shear Strength, BIS 13055:1991;
After 24 hrs @ 25±2 °C
Steel Pins and collars : 3-7 N/mm^2

Torque, BIS 13055:1991 ; After 24 hrs @ 25±2°C
Breakaway Torque, : 6-9 N-m
M10 Phosphated Steel N&B
Prevail Torque, : 3-5 N-m
M10 Phosphated Steel N&B

Hot Strength

Test : Breakaway Torque, BIS 13055:1991
Substrate : M10 Phosphated Steel N&B
Cure : 24 hrs @ 25±2 °C

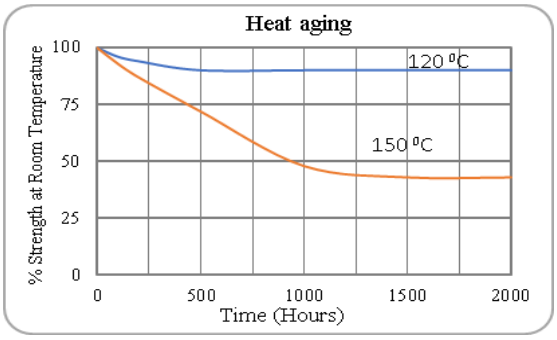
Tested at temperature indicated



Heat Aging

Test : Breakaway Torque, BIS 13055:1991
Substrate : M10 Phosphated Steel N&B
Cure : 24 hrs @ 25±2 °C

Aged at temperature indicated and tested @ 25±2 °C.



Chemical/Solvent Resistance

Test : Breakaway Torque, BIS 13055:1991
Substrate : M10 Phosphated Steel N&B
Cure : 24 hrs @ 25±2 °C

Aged under condition indicated and tested @ 25±2 °C.

Environment	Temp (^{0}C)	% of Initial Strength	
		168 hr	500 hr
Engine Oil	120	100	98
Gear Oil	120	100	95
Brake fluid	25±2	100	97
Water Glycol (50/50)	87	80	75
Unleaded Petrol	25±2	96	95
Diesel	25±2	80	80

Directions for use

1. For best performance the bond surfaces should be clean and free from grease.
2. The product is designed for close fitting parts.
3. If the material is an inactive metal or the cure speed is too slow, spray all threads with Metlok Activator 1001 or 1006 and allow to dry
4. Shake the product thoroughly before use
5. To prevent the product from clogging in the nozzle, do not allow the tip to touch metal surfaces during application.
6. For Sealing, 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, adjust product amount accordingly and apply a 360° bead of product on the female threads also.
7. 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 solvent and mechanical abrasion such as a wire brush.

Handling

- For safe handling My-T-Lok® 313 must be handled in a manner as indicated in Material Safety Data Sheet (MSDS) and in compliance with relevant local regulations.
- My-T-Lok® 313 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
- My-T-Lok® 313 can affect certain plastics particularly thermoplastic materials or coatings. It is recommended to check all surfaces for compatibility before use.
- 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.
- My-T-Lok® 313 is non-volatile and non-flammable at room temperature.

Storage

- Store My-T-Lok® 313 in a cool, dry location in unopened containers at 25±2°C.
- Store away from sunlight and heat sources.
- My-T-Lok® 313 will exhibit a shelf life of 18 months when stored in above mentioned conditions.
- To prevent contamination of unused product, do not return any material to its original container. For further specific shelf life information, contact our Technical Service center R&D Center.

Packaging

My-T-Lok® 313 is ideally available in 50 ml and 250 ml pack size.

Note

All statements, technical information and recommendations set forth herein are based on tests which Metlok Private Limited, believes to be reliable. However, Metlok Private Limited does not guarantee their accuracy or completeness. 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 no case will Metlok Private Limited be liable for direct, consequential economic or other damages.

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