TECHNICAL DATA SHEET
My-T-Lok® 172
Thread /Pipe Sealant with Mica
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(An ISO 9001 Certified Company)
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Product Description

My-T-Lok® 172 is designed for the locking and sealing of metal threaded pipes and fittings. It has a special property of delayed initial curing which allows more time for readjustment of pipes and fittings. The product 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 of My-T-Lok® 172 reduces the migration of liquid product after application to the substrate.

Special Feature:

- High Viscosity, Thixotropic
- White to off-white paste
- Medium Strength Thread Sealant
- Reduces migration of liquid product after application to the substrate.

Applications:

- For the locking and sealing of metal threaded pipes and fittings in automotive, commercial vehicles and defense equipments.
- Particularly suitable for use on stainless steel without the need for surface activation.
- Particularly useful in sealing pipe joints in process industries Viz., Textile, waste water treatments, power generation, petroleum refineries, paper and pulp, mining, irrigation systems etc.

Properties

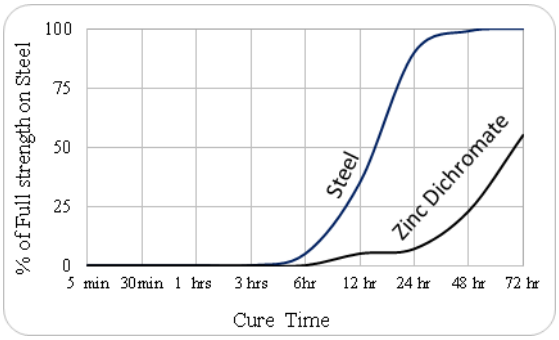
Technology	:	Acrylic
Chemical Type	:	Dimethacrylate ester
Component	:	One Component
Appearance	:	White to Off-white Paste
Specific Gravity @ 25 °C	:	1.25±0.1
Viscosity @ 25±2 °C, Brookfield, Spindle # 6, Speed 20 r.p.m.	:	14000 - 29000 cP
Cure	:	Anaerobic
Secondary cure	:	Activator

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.

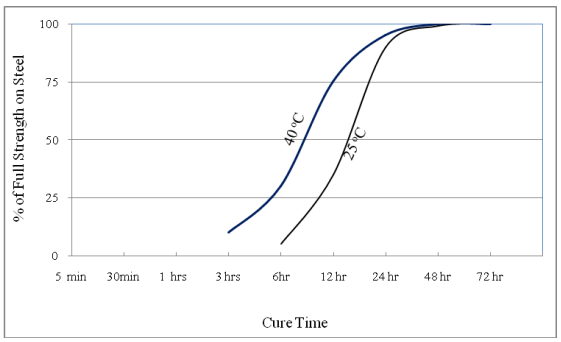
Cure Speed vs. Substrate

The rate of cure will depend on the substrate used. The graph below shows the breakaway strength developed with time on M10 Phosphated Steel and Zinc dichromate nuts and bolts and tested according to BIS 13055:1991.



Cure Speed vs. Temperature

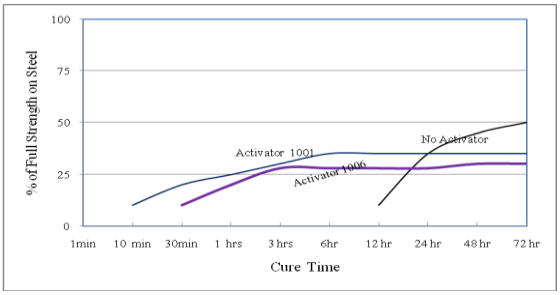
The rate of cure will depend on the ambient temperature. The graph below shows the breakaway strength developed with time on M10 Phosphated Steel nuts and bolts at different temperature and tested according to BIS 13055:1991.



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

Physical Properties

Coefficient of Thermal Expansion, ASTM D 696, K^{-1}	:	80×10^{-6}
Coefficient of Thermal Conductivity, ASTM C177, W/(m·K)	:	0.1
Specific Heat, kJ/(kg·K)	:	0.3

Compressive Shear Strength, BIS 13055:1991;
After 24 hrs @ 25±2 °C
Steel Pins and Collars : ≥ 0.5 N/mm^2

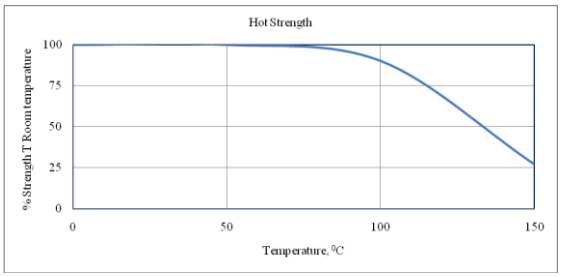
Torque, BIS 13055:1991 After 24 hrs @ 25±2 °C
Breakaway Torque, : 4-10 N-m
M10 Phosphated Steel N&B
Prevail Torque, : 1-5 N-m
M10 Phosphated Steel N&B

Torque, BIS 13055:1991 After 24 hrs @ 25±2 °C
Breakaway Torque, : 12-28 N-m
Pre-torqued to 5 N·m
M10 Phosphated Steel N&B
Prevail Torque, : 12-28 N-m
Pre-torqued to 5 N·m
M10 Phosphated Steel N&B
Pipe sealing /Thread sealing BIS 13055:1991; After 24 hrs @ 25±2 °C
Pressure resistance : ≥ 100 bar

Hot Strength

Test : Breakaway Torque, BIS13055:1991
Substrate : M10 Phosphated Steel N&B
Cure : One week @ 25±2 °C

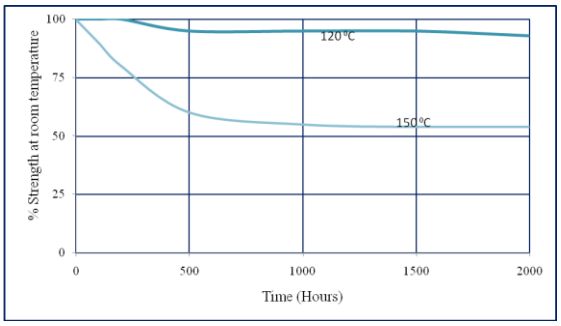
Tested at temperature indicated



Heat Aging

Test : Breakaway Torque, BIS13055:1991
Substrate : M10 Phosphated Steel N&B
Cure : One week @ 25±2 °C

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



Chemical/Solvent Resistance

Test : Breakaway Torque, BIS13055:1991
Substrate : M10 Phosphated Steel N&B
Cure : One week @ 25±2 °C

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

Environment	Temp (^{0}C)	% of Initial Strength		
		100 hrs	500 hrs	1000 hrs
Engine oil	120	100	80	80
Gear oil	120	100	90	90
Unleaded Petrol	25±2	100	98	95
Diesel	25±2	100	100	94
Brake fluid	25±2	100	100	100
Water Glycol (50/50)	87	85	65	60

Directions for Use

For Assembly

1. For best results, clean all surfaces (external and internal) with a cleaning solvent and allow to dry
2. If the material is an inactive metal or the cure speed is to slow, apply all threads with Activator and allows to dry

3. Apply 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 product on the female threads also.
4. Using accepted trade practices assemble and wrench tighten fittings until proper alignment is obtained.
5. Properly tightened fittings will seal instantly to moderate pressures. For maximum pressure resistance and solvent resistance allow the product to cure a minimum of 24 hours.

For Disassembly

1. Remove with standard hand tools.
2. Where hand tools do not work because of excessive engagement length or large diameters, apply localized heat 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® 172 must be handled in a manner as indicated in Material Safety Data Sheet (MSDS) and in compliance with relevant local regulations.
- My-T-Lok® 172 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® 172 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® 172 is non-volatile and non-flammable at room temperature.

Storage

- Store Product My-T-Lok® 172 in a cool, dry location in unopened containers at 25±2°C.
- Store away from sunlight and heat sources.
- My-T-Lok® 172 will exhibit a shelf life of 18 months from the date of manufacture 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.

Pack Size

My-T-Lok® 172 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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