

## TECHNICAL DATA SHEET

### My-T-Lok® 3701

High Strength Threadlocker

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METLOK PRIVATE LIMITED  
(An ISO 9001 Certified Company)  
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### Product Description

My-T-Lok® 3701 is designed for the permanent locking and sealing of threaded fasteners. The product cures when confined in the absence of air between close fitting metal surfaces and prevents loosening and leakage from shock and vibration.

### Applications:

Applicable for locking and sealing of larger bolts and studs (M10 and larger).

- ❖ Locking of engine studs
- ❖ Connecting rod bolts
- ❖ Locking of bolts in different gear box assembly
- ❖ Locking of piston rods to piston in shock absorbing system
- ❖ Sealing of cylindrical parts

### Properties

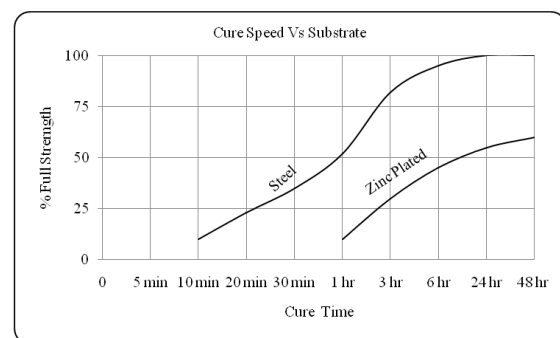
Technology	: Acrylic
Chemical Type	: Dimethacrylate ester
Components	: One component
Appearance	: Green
Specific Gravity @ 25 °C	: 1.04
Viscosity @ 25±2 °C, Brookfield, Spindle no.3, Speed 20 r.p.m.	: 2200 – 3000 cP
Cure	: Anaerobic
Secondary cure	: Activator
Strength	: High
Service Temperature	: -50 °C to 200 °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.

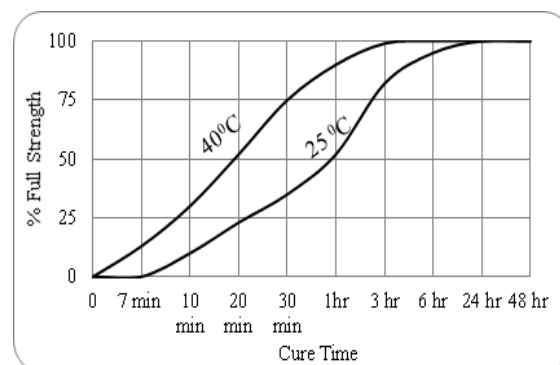
### Cure Speed vs Substrate

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

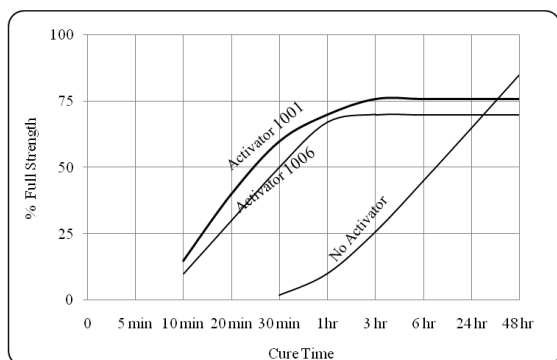
The rate of cure will depend on the ambient temperature. The graph below shows the breakaway strength developed with time on M10 phosphated steel nuts and bolts at different temperatures and tested according to BIS 13055:1991.



### 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 Activator 1001 and 1006 and tested according to BIS 13055:1991.



### Adhesive Properties of Cured Material

Torque, BIS 13055:1991 After 24 hours @ 25±2 °C  
 Breakaway Torque, : 40-60 N-m  
 M10 Phosphated Steel N&B  
 Prevail Torque, : ≥ 30 N-m  
 M10 Phosphated Steel N&B

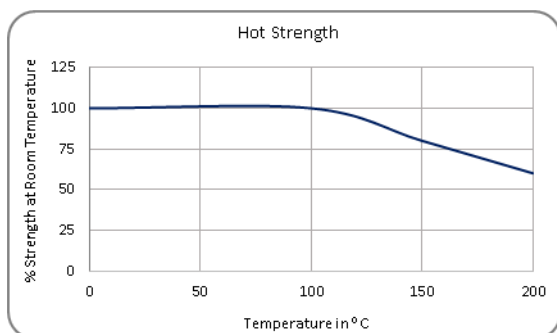
Breakloose Torque, : 45-65 N-m  
 Pre-torqued to 5 N-m,  
 M10 Phosphated Steel N&B  
 Max. Prevail Torque, : ≥ 35 N-m  
 Pre-torqued to 5 N-m,  
 M10 Phosphated Steel N&B

Compressive Shear Strength, BIS 13055:1991;  
 After 24 hours @ 25±2 °C  
 Steel Pins and Collars : 20-30 N/mm<sup>2</sup>

### Hot Strength

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

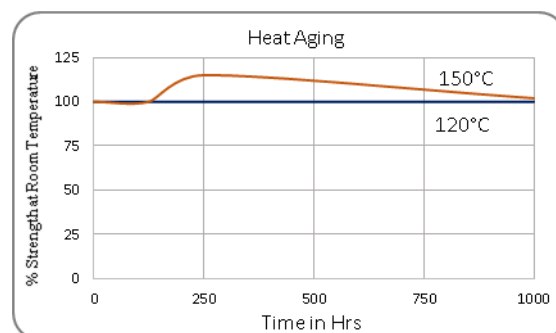
Tested at temperature indicated



### 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 (°C)	% of Initial Strength	
		200 hrs.	500 hrs.
Engine Oil	120	100	100
Gear Oil	120	100	100
Brake fluid	25±2	100	100
Water Glycol (50/50)	87	88	68
Unleaded Petrol	25±2	100	100
Diesel	25±2	100	98
Acetone	25±2	100	100
Ethanol	25±2	100	95

### Directions for Use

1. For best performance clean all surfaces (external and internal) with a cleaning solvent and allow drying. 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

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#### **Handling**

- ❖ For safe handling My-T-Lok® 3701 must be handled in a manner as indicated in Material Safety Data Sheet (MSDS) and in compliance with relevant local regulations.
- ❖ My-T-Lok® 3701 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® 3701 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® 3701 is non-volatile and non-flammable at room temperature.

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#### **Storage**

- ❖ Store Product My-T-Lok® 3701 in a cool, dry location in unopened containers at 25±2°C.
- ❖ Store away from sunlight and heat sources.
- ❖ My-T-Lok® 3701 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.

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#### **Pack Size**

My-T-Lok® 3701 is ideally available in 50 ml and 250 ml pack size.

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#### **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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#### **METLOK PRIVATE LIMITED**

(Bonding and Sealing Solutions)

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