

## TECHNICAL DATA SHEET

### My-T-Lok® 491

High Temperature and High Strength  
April 2019



METLOK PRIVATE LIMITED  
(An ISO 9001 Certified Company)  
W-27, M.I.D.C. Industrial Area  
Kalmeshwar – 441 501, Nagpur

#### Product Description

My-T-Lok® 491 is designed for retaining applications, used primarily for joining cylindrical assemblies. The product cures when confined between ferrous or copper alloys metals. My-T-Lok® 491 is used for fills the gap distances up to 0.015" and where maximum strength at room temperature is required.

#### Special Features:

- ❖ A maximum strength anaerobic retaining adhesive compound used where high dynamic force or cyclic loading is expected.
- ❖ Ideal for gap distances up to 0.015" diameter clearance.
- ❖ Fixtures in 3-5 minutes and provides high shear strength after 3 hours.
- ❖ Easily joins dissimilar metals.

#### Applications:

- ❖ Holding gears and sprockets onto gearbox
- ❖ Shafts and rotors on electric motor shafts.
- ❖ Locks bearings on shafts and in housings, bonds sleeves, wear rings and bushings in place
- ❖ It is also used in retaining small gears on shaft without press fit
- ❖ It is also used in augments press fits, bonds pivot pins, adapters and plugs in place and seals mechanical fits that have small clearances.

#### Properties

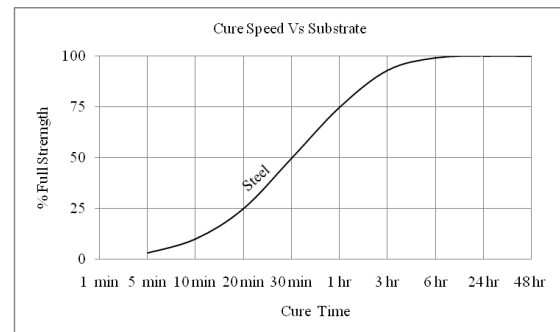
Technology	: Acrylic
Chemical Type	: Urethane acrylate
Components	: One component
Appearance	: Green liquid
Specific Gravity @ 25 °C	: 1.09
Brookfield, Viscosity @ 25±2 °C, Spindle # 2	: 400-800 cP
Speed 20 r.p.m.	
Cure	: Anaerobic
Secondary Cure	: Activator
Strength	: High
Service temperature	: -50 °C to 200 °C
Application	: Retaining

#### Curing Performance

My-T-Lok® 491 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.

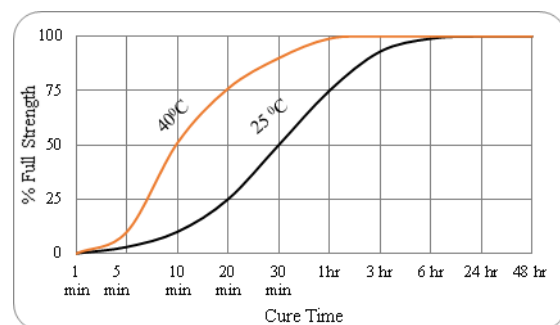
#### Cure Speed vs. Substrate

The rate of cure will depend on the substrate used. The graph shows the shear strength developed with time on steel pins and collars and tested according BIS 13055:1991.



#### Cure Speed vs. Temperature

The rate of cure will depend on the ambient temperature. The graph shows the shear strength developed with time at different temperatures on steel pins and collars and tested according to BIS 13055:1991.

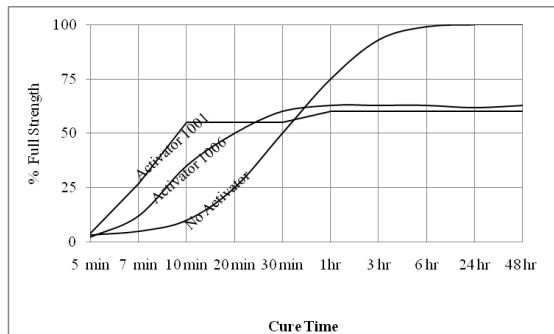


#### Cure Speed vs. Activator

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 shows shear strength developed with time using Activator® 1001 and Activator®1006 on steel pins and collars 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 : 20-25  
N/mm<sup>2</sup>

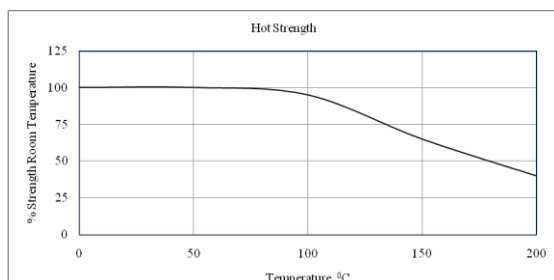
Compressive Shear Strength, BIS 13055:1991;  
After 1hrs @ 25±2 °C  
Steel Pins and collars : 11-15  
N/mm<sup>2</sup>

Torque, BIS 13055:1991; After 24 hrs @ 25±2 °C  
Breakaway Torque, : 25-35  
M10 Phosphated Steel Nut and Bolt N-m  
Prevail Torque, : 15-25  
M10 Phosphated Steel Nut and Bolt N-m

### Hot Strength

Test : Shear Strength, BIS 13055:1991  
Substrate : Steel Pins and Collars  
Cure : 24 hrs @ 25±2 °C

Tested at temperature indicated

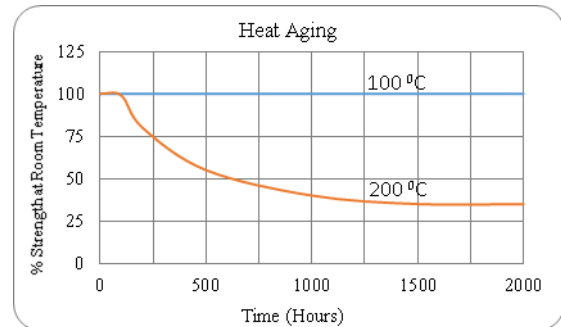


### Heat Aging

Test : Shear Strength, BIS 13055:1991  
Substrate : Steel Pins and Collars

Cure : 24 hrs @ 25±2 °C

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



### Chemical/Solvent Resistance

Test : Shear Strength, BIS 13055:1991  
Substrate : Steel Pins and Collars  
Cure : 24 hrs @ 25±2 °C

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

Environment	Temp (°C)	% of Initial Strength		
		100 hrs	500 hrs	1000 hrs
Engine oil	120	100	100	100
Brake fluid	25±2	100	100	98
Acetone	25±2	100	100	100
Ethanol	25±2	100	100	100
Water Glycol (50/50)	87	100	75	65

### Directions for Use

1. For best performance bond surfaces should be clean and free from grease.
2. If the material is an inactive metal or the cure speed is to slow, apply Activator® 1001 and Activator®1006 on all threads and allowed to dry.
3. Ensure joints are completely filled with adhesive.
4. For slip fitted assemblies apply adhesive around the pins and threading edge of the collars.
5. For Press fitted assemblies, the adhesive should be coated onto the pin.
6. The collar should be heated to create sufficient clearance for free assembly.
7. This grade will develop temperature resistance after expose to heat cure as mentioned in heat curing graph.
8. Clean excess adhesive.
9. Cured adhesive can be removed with a solvent and mechanical abrasion such as wire brush.

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**Handling**

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- ❖ For safe handling My-T-Lok® 491 must be handled in a manner as indicated in Material Safety Data Sheet (MSDS) and in compliance with relevant local regulations.
- ❖ My-T-Lok® 491 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® 491 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® 491 is non-volatile and non-flammable at room temperature.

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**Storage**

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- ❖ Store Product My-T-Lok® 491 in a cool, dry location in unopened containers at 25±2 °C.
- ❖ Store away from sunlight and heat sources.
- ❖ My-T-Lok® 491 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 or R&D Center.

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**Pack Size**

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My-T-Lok® 491 is ideally available in 50 ml and 250 ml pack size.

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**Note**

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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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