TECHNICAL DATA SHEET

My-T-Lok® 432

Medium Strength

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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® 432 is medium strength, low viscosity retaining anaerobic adhesive designed for the bonding of cylindrical fitting parts, where disassembly is required for service operations. The product cures when confined in the absence of air between close fitting metal surfaces and prevents loosening and leakage from shock and vibration. Fixture time 5-10 minutes.

Applications

- Retaining of bearings onto shafts and into housing.
- Retaining of core plugs in engine housing.

Properties

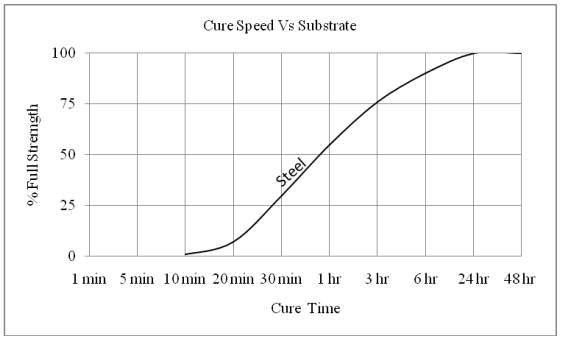
Technology	:	Acrylic
Chemical type	:	Methacrylate
Components	:	One component
Appearance	:	Green liquid
Specific Gravity @ 25 °C	:	1.04
Viscosity @ 25±2 °C, Brookfield, Spindle#2 Speed 20 r.p.m.	:	700-1500 cP
Cure	:	Anaerobic
Secondary cure	:	Activator
Strength		Medium
Service temperature	:	-50 ^{0}C to 150 ^{0}C
Application	:	Retaining

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.

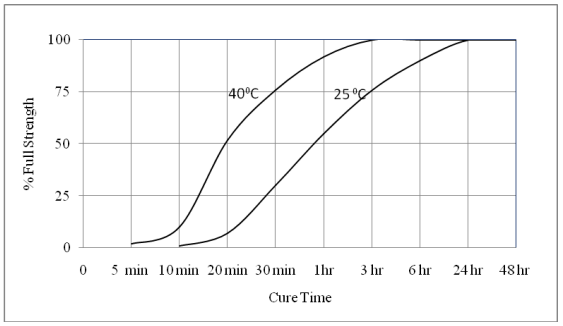
Cure Speed vs. Substrate

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



Cure Speed vs. Temperature

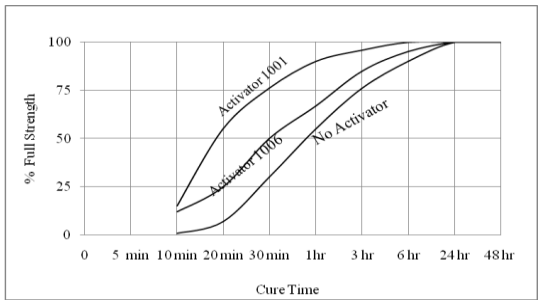
The rate of cure will depend on the ambient temperature. The graph shows the shear strength developed with time at different temperatures on steel pins and collars and tested according to BIS 13055:1991.



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 below shows shear strength developed with time using Activator® 1001 and Activator ® 1006 on steel pins and collars and tested according to BIS 13055:1991.



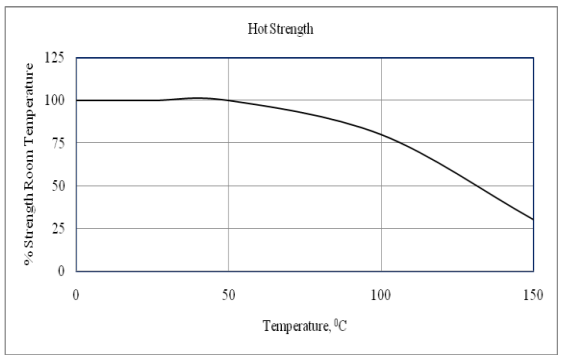
Adhesive Properties of Cured Material

Compressive Shear Strength, BIS 13055:1991;
After 24 hours @ 25±2 °C
Steel Pins and collars : 12-22 N/mm^2

Torque ; BIS 13055:1991After 24 hours @ 25±2 °C
Breakaway Torque, : 25-35 N-m
M10 Phosphated Steel Nut and Bolt
Prevail Torque, : 10-20 N-m
M10 Phosphated Steel Nut and Bolt

Hot Strength

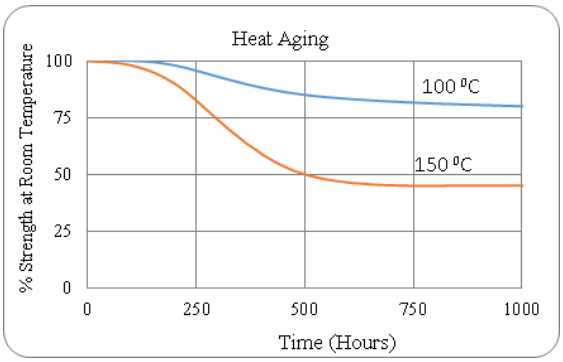
Test : Shear Strength, BIS 13055:1991
Substrate : Steel Pins and Collars
Cure : 24 hrs @ 25±2 °C
Tested at temperature indicated



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 (^{0}C)	% of initial strength		
		100 hrs	500 hrs	1000 hrs
Engine oil	120	100	100	100
Brake Fluid	25±2	100	100	100
Water Glycol (50/50)	87	95	78	65
Ethanol	25±2	100	100	100
Acetone	25±2	100	95	80

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. For Slip Fitted Assemblies, apply adhesive around the leading edge of the pin and the inside of the collar and use a rotating motion during assembly to ensure good coverage.
4. For Press Fitted Assemblies, apply adhesive thoroughly to both bond surfaces and assemble at high press on rates.
5. For Shrink Fitted Assemblies the adhesive should be coated onto the pin, the collar should then be heated to create sufficient clearance for free assembly.
6. Parts should not be disturbed until sufficient handling strength is achieved.

For Disassembly

1. Apply localized heat to the assembly 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® 432 must be handled in a manner as indicated in Material Safety Data Sheet (MSDS) and in compliance with relevant local regulations.
- My-T-Lok® 432 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® 432 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® 432 is non-volatile and non-flammable at room temperature.

Storage

- Store Product My-T-Lok® 432 in a cool, dry location in unopened containers at 25±2°C.
- Store away from sunlight and heat sources.
- My-T-Lok® 432 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.

Pack Size

My-T-Lok® 432 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.
Continuous Product Improvement is an important policy of the company and is an ongoing activity. As such we reserve the right to improve the performance of the product continuously by modifying the formulation in a manner that it enhances the performance functions.

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