Technical Data Sheet

H.B. Fuller | Engineering Adhesives

72TL

72TL is a very high temperature(+230° C) resistant, high strength anaerobic adhesive for locking and sealing thread connections and fitted parts. High viscosity and thixotropic effect allows larger tolerances. Highly resistant to corrosion, vibrations, water, gases, oils, hydrocarbons, and many chemicals.

Technology / Base	Dimethacrylate Ester
Type of Product	Threadlocking Adhesive and Sealant
Components	One Component
Curing	Anaerobic with Secondary Heat Cure
Appearance / Color	Orange
Consistency	Thixotropic Liquid

Features and Benefits

- Very High Temperature Stability
- Highly Resistant to Corrosion, Vibrations, Water, Gases, Oils, Hydrocarbons, and Many Chemicals
- High Strength
- Medium Viscosity

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Physical Property	Value	Condition/Method
Uncured Material Characteristics		
Viscosity	4000 to 15,000 cPs	Brookfield at 25°C, Spindle 4, 20 rpm
Specific Gravity	1.11	
Flash Point	> 93°C	
Shelf Life	12 months unopened	
Storage Condition	8 to 28°C	
Gap Fill	0.05 mm maximum	
Set Time on Steel	15	
Full Cure Conditions	20 to 72 hours at room temperature, or 40°C bondline temperature for 1 hour to achieve 100% of strength on steel	
Cured Material Properties		
Coefficient of Thermal Expansion	80 ppm/K	ASTM D696
Thermal Conductivity	0.1 W/mK	ASTM C177
Specific Heat	0.3 kJ/kgK	
Breakaway Torque	18 to 28 N-m	ISO 10964
Breakloose Torque		
Service Temperature	-55ºC to 150ºC	
Cure Speed At Various Temperatures		% of Room Temperature Strength
	25%	**50%**	**100%**
5°C	2 hrs	4 hrs	65 to 72 hrs
40°C	8 min	15 min	1 hr
Cure Speed On Various Substrates		% of Room Temperature Strength
	25%	**50%**	**100%**
Steel	2 hrs	3 hrs	20 to 72 hrs
Zn Dichromate	2 hrs	3 hrs	20 to 72 hrs

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Physical Property	Value	Condition/Method
Chemical Resistance Testing		
	Test Temperature	% of Room Temperature Strength	Condition
50% Water/50% Glycol	87°C	58%	1000 hours measured at room conditions
Unleaded Gasoline	87°C	62%	1000 hours measured at room conditions
Motor Oil	87°C	62%	1000 hours measured at room conditions
Isopropyl Alcohol	87°C	87%	1000 hours measured at room conditions
Toluene	87°C	80%	1000 hours measured at room conditions

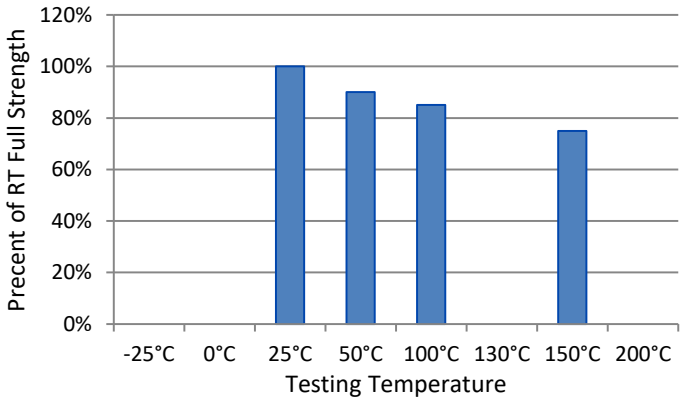
General Instructions

Surfaces to be bonded should be clean and dry and free of grease. Product should be applied in enough quantity to fill all engaged threads or gap. The product performs best in thin bond gaps. Very large gaps may create gaps that will affect the cure speed and overall strength. Good contact is essential. It is recommended to confirm compatibility of the product with all substrates prior to use. This product is not recommended for use with strong oxidizing materials. Where aqueous washing systems are used to clean the surfaces before bonding, these aqueous washes can affect the cure and performance of the adhesive. This product is not normally recommended for use on plastics, users must check compatibility of the product with such substrates.

Specifications

ASTM D-5363 AN 0211

Hot Strength (%RT strength, tested at temperature)



Storage

Products should be stored unopened in a cool, dry place out of direct sunlight. Products may be refrigerated for improved shelf life, but should be brought back to room temperature before use.

Curing Performance

The rate of cure will depend on environmental conditions and the substrates used. The gap of the bond line will affect set speed. Smaller gaps tend to increase set speed. Activators may be applied to further improve set speed, but may also impair overall adhesive performance.

Safety and Disposal

For complete safety and handling information, please refer to the appropriate Safety Data Sheets prior to using this product.

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