Technical Data Sheet

H.B. Fuller | Engineering Adhesives

71TL

71TL is a high strength red anaerobic adhesive for locking and sealing of studs, nuts, bolts and threaded fasteners not requiring dismantling. Highly resistant to heat, corrosion, vibrations, water, gases, oils, hydrocarbons, and many chemicals. Permanent adhesion (may require heat to disassemble). Lower viscosity for improved coverage of smaller threaded areas.

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

Features and Benefits

- High Strength
- Highly Resistant to Heat, Corrosion, and Vibrations
- Highly Resistant to Water, Gases, Oils, Hydrocarbons, and Many Chemicals
- Prevents Fasteners from Loosening
- Prevents Rust and Corrosion

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Physical Property	Value	Condition/Method
Uncured Material Characteristics		
Viscosity	400 to 600 cPs	Brookfield at 25°C, Spindle 1, 10 rpm
Specific Gravity	1.1	
Flash Point	> 93°C	
Shelf Life	12 months unopened	at 20°C
Storage Condition	8 to 28°C	
Gap Fill	0.05 mm maximum	
Set Time on Steel	24 hours	
Full Cure Conditions	24 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
Breakaway Torque	17 to 40 N-m	ISO 10964
Prevailing Torque	23 to 40 N-m	ISO 10964
Service Temperature	-55ºC to 150ºC	

Cure Speed At Various Temperatures	% of Room Temperature Strength		
	25%	**50%**	**100%**
5°C	5 hrs	10 hrs	24 hrs
40°C		25 min	1 to 24 hrs

Storage

Products should be stored unopened in a cool (8 to 28°C), dry place out of direct sunlight. Products may be refrigerated for improved shelf life, but should be brought back to room temperature before use.

Safety and Disposal

For complete safety

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.

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Cure Speed On Various Substrates

	% of Room Temperature Strength		
	25%	**50%**	**100%**
Steel	15 min	40 min	24 hrs
Brass	20 to 24 hrs		
Zn Dichromate	15 min	40 min	24 hrs

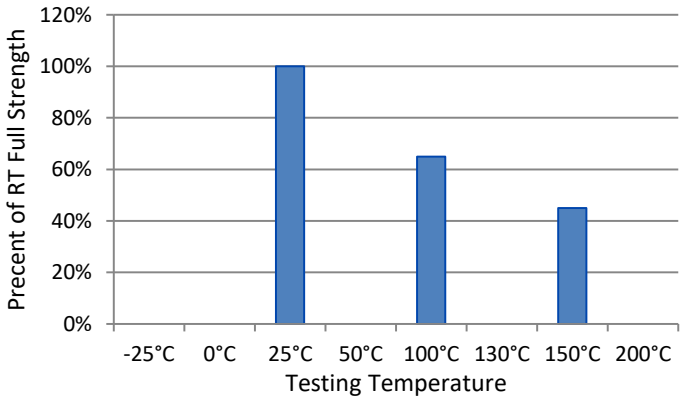
Chemical Resistance Testing

	Test Temperature	% of Room Temperature Strength	Condition
50% Water/50% Glycol	87°C	85%	Immersed for 1000 hours at indicated temperature. Tested at room temperature.
Unleaded Gasoline	22°C	95%	
Motor Oil	125°C	75%	
Brake Fluid	22°C	100%	
Acetone	22°C	95%	

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. Flanges should tightened as soon as possible after assembly to avoid shimming. 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.

Hot Strength (%RT strength, tested at temperature)



Specifications

MIL-S- 46163, Type 1, Grade K

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