



77TL

77TL is a high strength anaerobic adhesive for locking and sealing thread connections and fitted parts. High viscosity allows larger tolerances assembling. Highly resistant to heat, 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	Red
Consistency	Viscous Liquid

Features and Benefits

- Fluorescent UV Indicator
- Highly Resistant to Heat, Corrosion, Vibrations, Water, Gases, Oils, Hydrocarbons, and Many Chemicals
- High Strength
- Medium Viscosity

Technical Data

Physical Property	Value	Condition/Method	
Uncured Material Characteristics			
Viscosity	6000 to 8000 cPs	Brookfield at 25°C, Spindle 4, 20 rpm	
Specific Gravity	1.12		
Flash Point	> 93°C		
Shelf Life	12 months unopened		
Storage Condition	8 to 28°C		
Gap Fill			
Set Time on Steel	15		
Full Cure Conditions	15 to 72 hours at 25°C		
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	23 to 40 N-m	ISO 10964	
Breakloose Torque	28 to 48 N-m	DIN 54454	
Service Temperature	-55°C to 150°C		
Cure Speed At Various Temperatures			
	25%	50%	100%
5°C	4 hrs	6 hrs	24 to 72 hrs
40°C	12 min	20 min	2 hrs
Cure Speed On Various Substrates			
	25%	50%	100%
Steel	1 hr	2 hrs	15 to 72 hrs
Brass	3 hrs	5 hrs	20 to 72 hrs
Zn Dichromate	1 hr	2 hrs	15 to 72 hrs



Technical Data

Physical Property	Value	Condition/Method
Heat Aging Testing		
3000 hrs at 120°C	60%	Room Temperature Strength
3000 hrs at 150°C	15%	Room Temperature Strength
Chemical Resistance Testing		
	Test Temperature	% of Room Temperature Strength
50% Water/50% Glycol	87°C	90%
Unleaded Gasoline	22°C	100%
Motor Oil	125°C	100%
Brake Fluid	22°C	100%
Acetone	22°C	95%
		Condition
		1000 hours measured at room conditions
		1000 hours measured at room conditions
		1000 hours measured at room conditions
		1000 hours measured at room conditions
		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

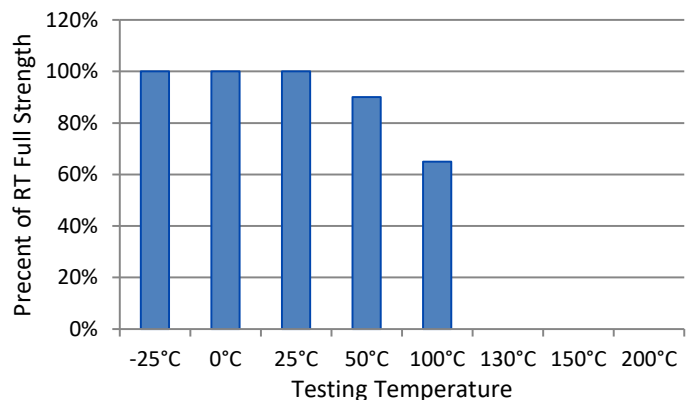
Storage

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.

Safety and Disposal

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

Hot Strength (%RT strength, tested at temperature)



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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