

Revised  
March 2002



9411 Corsair Road  
Frankfort, IL 60423  
1-800-552-0299 Phone  
1-815-464-5650 Fax

**EMERGENCY PHONE 1-800-255-3924**

## TECHNICAL DATA SHEETS

### TORQUE 77TL

#### Description:

**TORQUE 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.

#### PROPERTIES OF UNCURED PRODUCT (typical value)

Composition	Dimethacrylate Ester
Appearance	Red Fluorescent liquid
Specific Gravity (77°F/25°C g/ml)	1.12
Viscosity, Brookfield RVT(77°F/25°C mPa.s)	
Spindle 4- 20 rpm	6000 to 8000 mPa.s
Flash Point, TCC	>93°C
Shelf life at 20°C	1 year
Storage temperature	8° - 28°C

#### PROPERTIES OF CURED PRODUCT (typical value)

**Functional strength at 24 hrs 20° on steel**

Breakaway Torque (ISO 10964)	23 to 40 N.m
Breakloose Torque (DIN 54454)	28 to 48 N.m
Coefficient of thermal expansion (ASTM D696)	80 X 10 <sup>-6</sup> 1/K
Thermal conductivity(ASTM C177)	0.1 W/Mk
Specific heat	0.3 KJ.Kg <sup>-1</sup> K <sup>-1</sup>
Temperature range	-55° +150°C

#### ENVIRONMENTAL RESISTANCE

##### Hot strength at temperature

Test.Temp. °C	% retained strength
-25°	100%
0°	100%
50°	90%
100°	65%

##### Heat aging

Samples aged 3000 hours at indicated temperature and tested at room temperature.

Test temp. °C	% retained strength
120°	60%
150°	15%

##### Chemical / Solvent Resistance

Specimens immersed for 1000 hrs at indicated temperature and tested at room temperature.

	Test Temp. ° C	% retained strength
50/50 Water / Glycol	87	90
Unleaded Petrol	22	100
Motor Oil	125	100
Brake Fluid	22	100
Acetone	22	95



# TECHINCAL DATA SHEETS

## TORQUE 77TL



### CURE SPEED VS. SUBSTRATE

% Full strength	Steel	Brass
25	1 hrs	3 hrs
50	2 hrs	5 hrs
100	15-72 hrs	20-72 hrs

### CURE SPEED VS. JOINT GAP

% Full strength	Gap 0,154mm	Gap 0,27mm
25	6 hrs	23 hrs
50	12 hrs	30 hrs
100		

### CURE SPEED VS. TEMPERATURE

% Full strength	Temperature	
	4°C	40°C
25	4 hrs	12 min
50	6 hrs	20 min
100	24-72 hrs	2 hrs

### DIRECTIONS FOR USE

Use on clean and degreased parts. The product will cure correctly between close fitting flanged parts with gaps up to 0,05mm. Flanges should be tightened as soon as possible after assembly to avoid shimming.

### GENERAL INFORMATION

**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.

## **Engineering Excellence**

For technical information and support call **1-800-552-0299** or visit our website at

**[www.instantca.com](http://www.instantca.com)**