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## TECHNICAL DATA SHEETS

### TORQUE 90TL

#### Description:

**TORQUE 90TL** is a low viscosity and high capillary action for locking and sealing threaded fasteners and close fittings parts after assembly, also to penetrate and seal metal porosity in moulds and in castings. Medium to high strength locking. Highly resistant to heat, corrosion, vibrations, water, gases, oils, hydrocarbons, and many chemicals.

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

Composition	Dimethacrylate ester
Appearance	Green, fluorescent
Specific Gravity (77°F/25°C g/ml)	1.08
Viscosity (77°F/25°C mPa.s)	
Cannon-Fenske#150	9 to 16 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)

<b>Functional strength at 24 hrs 20° on steel</b>	
Breakaway torque (ISO 10964)	3 to 17 N.m
Breakloose torque (DIN 54454)	15 to 45 N.m
Coefficient of thermal expansion (ASTM D696)	$80 \times 10^{-6} \text{ 1/K}$
Thermal conductivity (ASTM C177)	0.1 W/Mk
Specific heat	$0.3 \text{ KJ.Kg}^{-1} \text{ K}^{-1}$
Temperature range	55°+150°C

#### ENVIRONMENTAL RESISTANCE

##### Hot strength at temperature

Test Temp. °C	% retained strength
25°	100%
50°	100%
100°	85%
150°	65%

##### Heat aging

Samples aged 2000 hours at indicated temperature and tested at room temperature.

Test temp. °C	% retained strength
120°	45%
150°	15%

##### Chemical / Solvent Resistance

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

	Test Temp. °C	% retained strength
50/50 Water / Glycol	87	90
Leaded Petrol	22	90
Motor Oil	125	50
Brake Fluid	22	85
Acetone	22	85



# TECHINCAL DATA SHEETS

## TORQUE 90TL



### HEAT CURE

Typical heat cure conditions consist of heating and maintaining bondline at a temperature of 40°C and after one hour 100% of strength on steel is achieved.

### CURE SPEED VS. SUBSTRATE

% Full strength	Steel	Stainless Steel
25	25 min	4 hrs
50	45 min	
100	4-72 hrs	

### CURE SPEED VS. JOINT GAP

% Full strength	Gap 0,05mm	Gap 0,15mm
25	40 min	5 hrs
50	1 hrs	
100	3- 72 hrs	

### CURE SPEED VS. TEMPERATURE

% Full strength	Temperature	
	5°C	40°C
25	3 hrs	10 min
50	5 hrs	20 min
100	15- 72 hrs	1- 72 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 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)**