

Revised
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TECHNICAL DATA SHEETS
TORQUE 181

Description:

Torque 181 is a high strength anaerobic adhesive for locking and sealing thread connections. Highly resistant to heat, corrosion, vibrations, water, gases, oils, hydrocarbons and many chemicals. Maintains unaffected curing properties up to 200 °C on any metal surface

Properties of Uncured Product:

Composition	Methacrylate Ester
Appearance	Green liquid
Specific Gravity (77°F/25°C g/ml)	1.1
Viscosity, Brookfield RVT(77°F/25°C mPa.s)	
Spindle 4- 2.5 rpm	3500 mPa.s
Flash Point, TCC	>100°C
Shelf life at 20°C	1 year
Storage temperature	8° - 28°C

Properties of Cured Product:

Functional strength at 24 hrs 20° on steel		
Shear Strength (ISO 10123)		17 to 37 N.m
Shear Strength (DIN 54452)		20 to 35 N.m
Coefficient of thermal expansion (ASTM D696)		80 X 10 ⁻⁶ 1/K
Thermal conductivity (ASTM C177)		0.1 W/Mk
Specific heat		0.3 Kj.Kg ⁻¹ K ⁻¹
Temperature range		-55° +200°C

ENVIRONMENTAL RESISTANCE

Hot strength at temperature

Test.Temp.°C	% retained strength
25°	110%
50°	110%
100°	105%
150°	85%

CURE SPEED VS. SUBSTRATE

% Full strength	Steel	Aluminium
	25	25
	50	50
	100	100
	2hrs	8 hrs
	2.5 hrs	20 hrs
	15-72 hrs	72 hrs

CURE SPEED VS. JOINT GAP

% Full strength	Gap 0.05mm	Gap 0.25mm
	25	25
	50	50
	100	100
	2hrs	8 hrs
	2.5 hrs	
	15-72 hrs	

Heat aging

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

Test temp. °C	% retained strength
180°	140%
150°	170%

CURE SPEED VS. TEMPERATURE

% Full strength	Temperature
	5°C
	28 hrs
	40°C
	45 min
	40 min
	15-72 hrs

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	80
Unleaded Petrol	22	95
Motor Oil	125	100
Brake Fluid	22	100
Acetone	22	95

Engineering Excellence

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

www.instantca.com