

Revised
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TECHNICAL DATA SHEETS
TORQUE 09RC

Description:

TORQUE 09RC is a high strength anaerobic adhesive for retaining of close fitted parts, shafts, bushes, pulleys, rotors, especially suitable to be used on oily surfaces as is. Highly resistant to heat, corrosion, vibrations, water, gases, oils, hydrocarbons and many chemicals.

PROPERTIES OF UNCURED PRODUCT (typical value)

Composition	Urethane Methacrylate
Appearance	Green, Fluorescent
Specific Gravity (77°F/25°C g/ml)	1.1
Viscosity, Brookfield (77°F/25°C mPa.s)	
Spindle 1- 20 rpm	100 to 150 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

Shear Strength (ISO 10123)	20 to 32 N.m
Shear Strength (DIN 54452)	16 to 25 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° +150°C

ENVIRONMENTAL RESISTANCE

Hot strength at temperature

Test.Temp. °C	% retained strength
25°	100%
50°	97%
100°	75%
150°	30%

Heat aging

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

Test temp. °C	% retained strength
120°	90%
150°	20%

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	85
Motor Oil	125	100



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HEAT CURE

Typical heat cure conditions consist of heating and maintaining bondline at a temperature of 40°C and after one hour more than 90% of strength on steel is achieved.

CURE SPEED VS. SUBSTRATE

% Full strength	Steel	Aluminium
25	20 min	2 hrs
50	35 min	15 hrs
100	6-72 hrs	

CURE SPEED VS. JOINT GAP

% Full strength	Gap 0,05mm	Gap 0,25mm
25	25 min	20 hrs
50	45 min	48 hrs
100	15-72 hrs	

CURE SPEED VS. TEMPERATURE

% Full strength	Temperature	
	5°C	40°C
25	4 hrs	7 min
50	8 hrs	12 min
100	72 hrs	3-72 hrs

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.

Note

These information should be used as a guide only, since values obtained depend on the nature of the specimens tested. For a specific application, values should be obtain on the actual parts to be bonded, using production conditions.

Engineering Excellence

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

www.instantca.com