

Revised
October 2013



EMERGENCY PHONE 1-800-255-3924
TECHNICAL DATA SHEETS
TORQUE 20RC & 20RCHH

Description:

TORQUE 20RC and TORQUE 20RCHH are anaerobic resins that are the best method for retaining, locking, and sealing a wide range of metal parts. Even in the tightest fitting assemblies voids are presents which allows for movement and potential loosening of the parts. TORQUE 20RC and 20RCHH form a tough, durable resin, that fills all these voids, creating a unitized assembly that is completely resistant to shock, vibration, and extremely harsh environmental conditions. These materials cure in the absence of air and in the present of metal. They are ideally suited for retaining cylindrical assemblies providing shock and vibration resistance.

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 5 @ 20 rpm	8000 cps (20RC) 12000 cps (20RCHV)
Flash Point, TCC	>100°C
Shelf life at 20°C	1 year
Storage temperature	8° to 28°C

PROPERTIES OF CURED PRODUCT

Shear Strength(ISO 10123)	>2000psi
Coefficient of thermal expansion (ASTM D696)	$80 \times 10^{-6} 1/K$
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
50°	110%
100°	110%
150°	105%
200°	85%

Heat aging

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

Test temp. °C	% retained strength
180°	125%
150°	170%

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



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CURE SPEED VS. SUBSTRATE

% Full strength	Steel	Aluminum
25	1 hrs	6 hrs
50	1 and 30min	
100	12-72 hrs	

CURE SPEED VS. JOINT GAP

% Full strength	Gap 0,05mm	Gap 0,30mm
25	2 hrs	13 hrs
50	2hrs and 30min	20 hrs
100	12-72 hrs	72 hrs

CURE SPEED VS. TEMPERATURE

% Full strength	Temperature	
	5°C	40°C
25	28 hrs	20 min
50		40 min
100		15-72 hrs

DIRECTIONS FOR USE

Clean and degrease parts for best results, apply product on male threads only, use enough quantity to fill joint completely. Assemble parts, avoid over tightening due to lubricating effect of product. Allow time to cure according to data sheet.

For potable water: approved for use with cold water, allow assemblies to cure 24 hrs before water contacting.

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.

NON-WARRANTY: Information contained herein is based on tests we believe to be reliable and accurate. It is offered in good faith for the benefit of the consumer. Adhesive Systems shall not be liable for any injury, loss, or damage in the use of its chemical products since the conditions of use are beyond our control. In every case we urge and recommend the user conduct tests to determine to their own satisfaction that the product is of acceptable quality and is suitable for their particular purpose under their own operating conditions. Statements concerning the possible use of our products are not intended as recommendations to use our products in the infringement of any patent. Because of changing reporting requirements and other variables it is impossible to guarantee the accuracy of the information contained in this document. It is the responsibility of the user to determine proper personal protection based on the actual condition of use and to comply with all Federal, State, and Local laws and regulations.

Engineering Excellence

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