

Revised  
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## TECHNICAL DATA SHEETS TORQUE 80 RC

### Description:

**Torque 80 RC** is a fast curing high strength anaerobic adhesive for locking and sealing threads, and retaining of cylindrical parts. Allows larger machining tolerances. Highly resistant to heat, corrosion, vibrations, water, gases, oils, hydrocarbons, and many chemicals.

### Properties of Uncured Product:

|   |                           |
|---|---------------------------|
| Composition                             | Urethane methacrylate     |
| Appearance                              | Green, fluorescent liquid |
| Specific Gravity (77°F/25°C g/ml)       | 1.11                      |
| Viscosity, Brookfield (77°F/25°C mPa.s) |                           |
| Spindle 3 - 20 rpm                      | 1400                      |
| Flash Point, TCC                        | >93°C                     |
| Shelf life at 20°C                      | 1 year                    |
| Storage temperature                     | 8° - 28°C                 |

#### 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     | Alluminium | Zinc Dichromate |
|-----------------|-----------|------------|-----------------|
| 25              | 22 min    | 2 hrs      | 40 min          |
| 50              | 34 min    | 15 hrs     | 2 hrs           |
| 100             | 18-72 hrs |            |                 |

#### CURE SPEED VS. JOINT GAP

| % Full strength | Gap 0,05mm  | Gap 0,25mm |
|-----------------|-------------|------------|
| 25              | 28 min      | 40 hrs     |
| 50              | 35 min      | 70 hrs     |
| 100             | 10 - 72 hrs |            |

#### CURE SPEED VS. TEMPERATURE

| % Full strength | Temperature |            |
|-----------------|-------------|------------|
|                 | 5°C         | 40°C       |
| 25              | 3 hrs       | 7 min      |
| 50              | 6 hrs       | 8 min      |
| 100             | 24 - 72 hrs | 2 - 72 hrs |

### Properties of Cured Product:

| Functional strength at 24 hrs 20° on steel   |  |   |
|--|--|---|
| Shear Strength (ISO10123)                    |  | 22 to 40 N.m                            |
| Shear Strength (DIN 544542)                  |  | 20 to 35 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%                |
| 50°          | 100%                |
| 100°         | 85%                 |
| 150°         | 45%                 |

##### Heat aging

Samples aged 1000 hours at indicated temperature and tested at room temperature.

| Test temp. °C | % retained strength |
|---------------|---------------------|
| 120°          | 100%                |
| 150°          | 100%                |

##### 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            | 80                  |
| Unleaded Petrol      | 22            | 85                  |
| Motor Oil            | 125           | 100                 |
| Brake Fluid          | 22            | 80                  |
| Acetone              | 22            | 90                  |

### Engineering Excellence

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

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