

Revised
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TECHNICAL DATA SHEETS
TORQUE GM 30

Description:

Torque GM 30 is an anaerobic curing adhesive for the gasketing and sealing of flanges. To replaces solid gaskets, gives flexible cured films. To seal against gases, water, LPG, hydrocarbons, oils and other chemicals. Thixotropic property prevents migration of the sealant before or during curing. Shocks and vibrations resistant are unaffected properties of sealing in the range of temperature from -55 to +180°C.

Properties of Uncured Product:

| | |
|---|-------------------------|
| Composition | Methacrylate Ester |
| Appearance | Red Fluorescent Liquid |
| Specific Gravity (77°F/25°C g/ml) | 1.13 |
| Viscosity, Brookfield (77°F/25°C mPa.s) | |
| Spindle 2 - 5 rpm | 650000 to 900,000 mPa.s |
| Flash Point, TCC | >93°C |
| Shelf life at 20°C | 1 year |
| Storage temperature | 8° - 28°C |

CURING PERFORMANCE

GM 10 is designed to be used and cured at room temperature. Where cured speed is unacceptably long, or large gaps are present, applying activator to the surface will reduce the curing within few minutes.

HEAT CURE

Typical heat cure conditions consist of heating and maintaining bondline at a temperature of 40°C and after one hour more than 80% of strength on steel is achieved.

CURE SPEED VS. SUBSTRATE

| % Full strength | Steel | Aluminium |
|-----------------|----------|-----------|
| 25 | 35min | 35min |
| 50 | 50min | 3hrs |
| 100 | 24-72hrs | |

CURE SPEED VS. JOINT GAP

| % Full strength | Gap 0,5mm |
|-----------------|-----------|
| 25 | 30min |
| 50 | 1 hrs |
| 100 | 6-72 hrs |

CURE SPEED VS. TEMPERATURE

| % Full strength | Temperature | |
|-----------------|-------------|----------|
| | 5°C | 40°C |
| 25 | 1 hrs | 20 min |
| 50 | 2 hrs | 25 min |
| 100 | 24 - 72 hrs | 6-72 hrs |

Properties of Cured Product:

Functional strength at 24 hrs 20° on steel

| | |
|--|---|
| Shear Strength (ASTM D1002) | 5 to 13 N.m |
| Tensile Strength (DIN 53288) | 4 to 14 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° | 85% |
| 100° | 45% |
| 150° | 30% |

Heat aging

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

| Test temp. °C | % retained strength |
|---------------|---------------------|
| 100° | 250% |
| 120° | 210% |
| 150° | 130% |

Chemical / Solvent Resistance

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

| | Test Temp. ° C | % retained strength |
|----------------------|----------------|---------------------|
| 50/50 Water / Glycol | 87 | 90 |
| Unleaded Gasoline | 22 | 55 |
| Motor Oil | 125 | 140 |

Engineering Excellence

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

www.instantca.com