

Revised
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TECHNICAL DATA SHEETS

43TL THREADLOCKER

Description:

ADVANCED PERFORMANCE SERIES THREADLOCKER 43TL is a medium strength anaerobic adhesive for thread locking of nuts and bolts of all types that require to be dismantled. Suitable to be used on oily surfaces. Highly resistant to heat, corrosion, vibrations, water, gas, oils, hydrocarbons and many chemicals. Also to be used as a thread sealant in the temperature range -55° +150°C.

Physical Properties:

PROPERTIES OF UNCURED PRODUCT (typical value)

| | |
|---|--------------------------------|
| Composition | Dimethacrylate ester |
| Appearance | Opaque Blue Fluorescent Liquid |
| Specific Gravity (77°F/25°C g/ml) | :1.08 |
| Viscosity, Brookfield (77°F/25°C mPa.s) | |
| Spindle 3 - 20 rpm : | 5000 mPa.s |
| 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 85% of strength on steel is achieved.

CURE SPEED VS. SUBSTRATE

| % Full strength | Steel | Brass | Stainless Steel |
|-----------------|----------|----------|-----------------|
| 25 | 20 min | 15 min | 10 hrs |
| 50 | 28 min | 20 min | |
| 100 | 3-72 hrs | 1-72 hrs | |

CURE SPEED VS. JOINT GAP

| % Full strength | Gap 0,05mm | Gap 0,25mm |
|-----------------|------------|------------|
| 25 | 15 min | 2 hrs |
| 50 | 25 min | 4 hrs |
| 100 | 6- 72 hrs | |

CURE SPEED VS. TEMPERATURE

| % Full strength | Temperature | |
|-----------------|-------------|------------|
| | 5°C | 40°C |
| 25 | 1 hrs | 10 min |
| 50 | 2 hrs | 20 min |
| 100 | 24 - 72 hrs | 2 - 72 hrs |



TECHNICAL DATA SHEETS

TORQUE 43TL



PROPERTIES OF CURED PRODUCT (typical value)

Functional strength at 24 hrs 20° on steel

| | | |
|----------------------------------|----------------|---|
| Breakaway torque | (ISO 10964)4,3 | 15 to 25 N.m |
| Breakloose torque | (DIN 54454) | 14 to 34 N.m |
| Coefficient of thermal expansion | (ASTM D696) | 80×10^{-6} 1/K |
| Thermal conductivity | (ASTM C177) | 0.1 W/Mk |
| Specific heat | | $0.3 \text{ KJ.Kg}^{-1} \text{ K}^{-1}$ |
| Temperature range | | -55°+150°C |

ENVIRONMENTAL RESISTANCE

Hot strength at temperature

| Test.Temp. °C | % retained strength |
|---------------|---------------------|
| 25° | 95% |
| 50° | 80% |
| 100° | 50% |
| 150° | 40% |

Heat aging

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

| Test temp. °C | % retained strength |
|---------------|---------------------|
| 100° | 90% |
| 120° | 80% |
| 150° | 35% |

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 |
| Leaded Petrol | 22 | 95 |
| Motor Oil | 125 | 95 |
| Brake Fluid | 22 | 100 |
| Acetone | 22 | 85 |

Engineering Excellence

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

www.instantca.com