

## TCOR

### Thermally Conductive RTV (Oxime)

#### DESCRIPTION

**TCOR** is a single component, 100% solids, low odour silicone RTV which cures upon exposure to atmospheric moisture. It has been designed to fill the gap between device and heat sink, thus reducing the thermal resistance. It can be applied around components and power resistors to dissipate excess heat to heat sinks, avoiding any potential overheating and subsequent failures. It can also be used as a low bond strength adhesive, sealant or gasketing compound.

READ ENTIRE TECHNICAL BULLETIN BEFORE USING THIS PRODUCT

#### FEATURES AND BENEFITS

- Higher bond strength than standard RTVs; can be used as a sealant or thermal adhesive
- High thermal conductivity; combines adhesive properties with efficiency of heat dissipation
- Very wide operating temperature range; combines properties required for the automotive market
- Single component, non-slump; ideal for applications requiring a higher viscosity product

#### APPROVALS

Standard	Status
RoHS Compliant (2015/863/EU)	Yes

#### PRODUCT INFORMATION

For available packaging sizes please visit:

[electrolube.com](http://electrolube.com)

### PHYSICAL PROPERTIES

Category	Results
<b>Typical Properties</b>	
Color	White
Viscosity @ 1rpm (Pas)	140 to 150
Consistency	Non-Slump Paste
Density @ 20 °C (g/mL)	2.3
Shrinkage on Cure	>0.2%
Skin Forming Rate*	10 to 15 minutes
Cure Time* @ 20 °C	24 hours
<b>Cured Properties</b>	
Thermal Conductivity (W/m.K)	1.8
Temperature Range (°C)	-50 to 230
Maximum Operating Temperature (30mins) (°C)	250
Shore Hardness	A75
Peel Strength (Kgf)	>4 (aluminium)
Tear Strength (Kgf)	1.52
Breaking Strength (Kgf)	4.30
Elongation at Break	300%
Dielectric Strength (kV/mm)	>8
Volume Resistivity ( $\Omega \cdot \text{cm}$ )	$1 \times 10^{14}$
Tensile Strength (MPa)	2

\* Curing rate and skin forming is dependent upon ambient conditions of temperature and humidity

### APPLICATION GUIDELINES

Surfaces must be clean and dry and free from grease, dust and contaminants. Electrolube manufacture a range of solvent and water based cleaning solutions for the preparation of surfaces prior to application. TCR GUN is a dispensing method for use with TCOR75S. The pack fits inside the dispensing unit; a trigger is pulled which forces out the product, offering efficient and accurate dispensing of TCOR75S. Due to the moisture curing nature of TCOR once a syringe has been opened it must be used in one use.

TCOR is a moisture curing system, releasing oxime upon cure. Relative humidity above 50% is preferred for curing. The use of elevated temperatures will not increase the speed of cure and is not recommended. When storing the TCOR do not store it in conditions above 30 °C and 50% RH to avoid a reduction in the shelf life.

TCOR has a reasonable bond strength for and can be used for adhesive applications.

### ADDITIONAL INFORMATION

There are many methods of measuring thermal conductivity, resulting in large variances in results. Electrolube utilise a heat flow method which takes into account the surface resistance of the test substrate, thus offering highly accurate results of true thermal conductivity. Some alternative methods do not account for such surface resistance and can create the illusion of higher thermal conductivity. Therefore, when comparing thermal conductivity measurements, it is important to know what test method has been utilised. For more information, please contact the Technical Department.

The rate at which heat flows is dependent on the temperature differential, the thickness and uniformity of the layer, and the thermal conductivity of the material. Products with the same comparable thermal conductivity value may have very different efficiencies of heat transfer in the end application depending on how successfully a thin even film can be applied.

#### Shelf Life

Thermally Conductive RTV (Oxime)	12 Months
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### SAFETY & WARNING

It is recommended that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use. **Safety Data Sheets are available.**

### CONTACT INFORMATION

To confirm this document is the most recent version, please contact  
**TechnicalSupportTeam@hkw.co.uk**  
[www.electrolube.com](http://www.electrolube.com)

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Also read carefully warning and safety information on the Safety Data Sheet. This data sheet contains technical information required for safe and economical operation of this product. READ IT THOROUGHLY PRIOR TO PRODUCT USE . Emergency safety directory assistance: US 1 202 464 2554, Europe + 44 1235 239 670, Asia + 65 3158 1074, Brazil 0800 707 7022 and 0800 172 020, Mexico 01800 002 1400 and (55) 5559 1588

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