TCOR
Thermally Conductive RTV (Oxime)

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.

- 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	**RoHS Compliant (2002/95/EC):**	**Yes**
Typical Properties	Colour:	White
	Viscosity @ 1rpm (Pa s):	140-150
	Consistency:	Non-Slump Paste
	Density @ 20°C (g/ml):	2.3
	Shrinkage on Cure	>0.2%
	Skin Forming Rate*:	10-15 minutes
	Cure Time @ 20°C*:	24 hours
	*Curing rate and skin forming is dependent upon ambient conditions of temperature and humidity	
Cured Properties:	Thermal Conductivity:	1.8 W/m.K
	Temperature Range:	-50 to +230ºC
	Maximum Operating Temperature (30mins):	+250ºC
	Shore Hardness:	A75
	Tensile Strength:	2 MPa
	Peel Strength:	>4 Kgf (aluminium)
	Tear Strength:	1.52 Kgf
	Breaking Strength:	4.30 Kgf
	Elongation at Break:	300%
	Dielectric Strength:	>8 kV/mm
	Electrical Insulation:	1 x 10^{14} Ohm/cm

Description	Packaging	Order Code	Shelf Life
Thermally Conductive RTV (Oxime)	75ml Syringe	TCOR75S	12 months
Dispensing Gun for 75ml Syringe	1 Unit	TCRGUNB	Not Applicable

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All information is given in good faith but without warranty. Properties are given as a guide only and should not be taken as a specification.

Electrolube cannot be held responsible for the performance of its products within any application determined by the customer, who must satisfy themselves as to the suitability of the product.

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Certificate No. FM 32082

Directions for Use

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. Electrolube 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.

TCOR is a moisture curing system, releasing ethanol 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.

TCOR has a reasonable bond strength for and can be used for adhesive applications. A lower bond strength RTV is also available from Electrolube, under the product code TCER.

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 Electrolube 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.

A full range of heat transfer products are available from Electrolube: standard and highly thermal conductive pastes (HTC, HTSP, etc.), gap filling materials (HTCPX), epoxy adhesives (TBS) and encapsulation resins (ER2220, UR5633, SC2003).

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