

## TCER Thermally Conductive RTV (Ethoxy)

TCER 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. TCER combines the properties of silicone rubber pads with those of a conventional heat transfer paste.

- Low bond strength product; suitable for applications requiring rework
- Excellent thermal conductivity; optimum efficiency of heat dissipation
- Very wide operating temperature range; combines properties required for the automotive market
- Single component, low viscosity and room temperature curing; quick and easy to apply

<b>Approvals</b>	<b>RoHS Compliant (2015/863/EU):</b>	<b>Yes</b>
<b>Typical Properties</b>	Colour:	White
	Viscosity @ 1rpm (Pa s):	80-90
	Consistency:	Pourable
	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	
<b>Cured Properties</b>	Thermal Conductivity:	2.2 W/m.K
	Temperature Range:	-50 to +230 °C
	Maximum Operating Temperature (30mins):	+250 °C
	Shore Hardness:	A60
	Tensile Strength:	2 MPa
	Peel Strength:	0.28 Kgf (aluminium)
	Tear Strength:	0.42 Kgf
	Breaking Strength:	2.26 Kgf
	Elongation at Break:	300%
	Dielectric Strength:	>8 kV/mm
	Volume Resistivity:	1 x 10 <sup>14</sup> Ohm-cm

<u>Description</u>	<u>Packaging</u>	<u>Order Code</u>	<u>Shelf Life</u>
<u>Thermally Conductive RTV (Ethoxy) Dispensing Gun for 75ml Syringe</u>	75ml Syringe 1 Unit	TCER75S TCRGUNB	12 months 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 TCER75S. The pack fits inside the dispensing unit; a trigger is pulled which forces out the product, offering efficient and accurate dispensing of TCER75S. Due to the moisture curing nature of TCER once a syringe has been opened it must be used in one use.

TCER 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. When storing the TCER do not store it in conditions above 30 °C and 50% RH to avoid a reduction in the shelf life.

TCER has relatively low bond strength and is suitable for use in applications where later removal may be required. The product will remain in place once cured but is not suitable for high adhesive or mechanical force applications. A higher viscosity RTV with increased bond strength is also available from Electrolube, under the product code TCOR.

## **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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