



# Technical Data Sheet

## TCOR Highly Thermally Conductive RTV

### Product Description

Electrolube TCOR is a single component, 100% solids, low odour RTV which cures upon exposure to atmospheric moisture. The product offers a high degree of thermal conductivity and is suitable for use over a very wide temperature range, making it ideal for a wide variety of uses, particularly in automotive applications. Combining the properties of silicone rubber pads with those of a conventional heat transfer paste, TCOR has been designed to fill the gap between the 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 be used as a low bond strength adhesive, sealant or gasketing compound.

A full range of heat transfer products are available from Electrolube. This range includes non-silicone and silicone based pastes for very high temperature applications (HTC/HTS), a low viscosity RTV rubber (TCER), an adhesive epoxy (TBS) and an epoxy based potting resin (ER2074).

### Features

- High viscosity, non-slump paste
- High thermal conductivity
- Good electrical insulation characteristics.
- Remains flexible and elastic at high temperatures.
- Good chemical resistance
- Wide operating temperature range

Approvals	RoHS Compliant (2002/95/EC):	Yes
Typical Properties:	Colour	White
	Viscosity (Pa s)	140-150
	Consistency	Non-Slump Paste
	Specific Gravity (Density) g/ml	2.3
	Shrinkage on cure	>0.2%
	Skin forming rate*	10-15 minutes
	Cure time (Hours @ 20°C) *	24
*Curing rate and skin forming is dependent upon ambient conditions of temperature and humidity		
Cured Properties:	Thermal Conductivity (W/mK)	1.8
	Temperature Range (°C)	-50 to +230
	Maximum Operating Temperature (30mins/°C)	+250
	Shore Hardness	A75
	Tensile Strength (MPa)	2
	Peel Strength (Kgf – aluminium)	>4
	Tear Strength (Kgf)	1.52
	Breaking Strength (Kgf)	4.30

Elongation at Break (%)	300
Dielectric Strength (kV/mm):	>8
Electrical Insulation $\Omega$ / cm:	$1 \times 10^{14}$

<u>Packing</u>	<u>Order Code</u>	<u>Shelf Life</u>
75ml Syringe Dispensing Gun for 75ml Syringe	TCOR75S TCRGUNB	12 months Not Applicable

### Directions for Use

Surfaces must be clean, dry and free from grease, dust and contaminants; Electrolube offer a range of cleaning products, including Ultrasolve (ULS), for such applications. Ensure that all solvents have completely evaporated 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 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.

### 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. When comparing thermal conductivity measurements it is therefore important to know what test method has been utilised. For more information please contact the Electrolube Technical Department.

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