MOMENTIVE™

Technical Data Sheet

NEVSil™ LSR TC330

Thermally Conductive Liquid Silicone Rubber

NEVSil LSR TC330 is a thermally conductive two-component liquid silicone rubber. The **NEVSil LSR TC330** provides an injection moldable option to produce articles which then provide a thermal path between the heat source and heat sink and or act as the heat sink itself. Potential can also be explored for the **NEVSil LSR TC330** technology to offer improved heat conduction in sensors and other thermal devices/applications.

NEVSil LSR TC330 has been specifically developed for applications in the New Energy Vehicle application space which are seeing ever increasing electrical power, higher frequencies and miniaturization of components creating heat which can damage electronic components, electrical contacts and can cause misfunction. Silicones are in general good thermal insulators which can lead to heat build-up in critical areas. The **NEVSil LSR TC330** technology is a thermally conductive material, which helps to remove the heat generated by an electronic device to the ambient environment in order to ensure reliable operation of electronic hardware and connections.

KEY FEATURES

- Excellent thermal conductivity
- Good processability
- Low compression set
- Excellent thermal resistance
- Excellent degradation resistance

APPLICATIONS

- Heat transfer pads and gaskets
- Automotive underhood / e-drive train cooling parts
- Thermally conductive e-battery applications
- Automotive sensors and thermal devices/applications

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PROPERTY DATA

Testing Items	Unit	Standard	Typical Data
Basic Property			
		PART A	PART B
Appearance		White	White
Viscosity in Pa·s $\gamma = 10\ s^{-1}$ at 20°C	DIN 53018	180	180
Typical Properties of Vulcanization *(Mix ratio of components A:B-1:1, Press cured for 10 minutes @ 175°C; Post Bake 4hours @200°C) The pot life of the mixture of the two components (closed vessel) at 20°C is three days, increased temperatures reduce pot life.*			
Specific Gravity	g/cm^3	DIN 53 479 A	2.3
Shore A Hardness	Durometer	DIN 53 505	33
Tensile Strength	MPa	DIN 53 504 S2	1.6
Elongation @ Break	%	DIN 53 504 S2	170
Tear Strength	N/mm	ASTM D 624-B	4
Compression Set*	%	ISO 815	10
Thermal Conductivity**	W/m·k		1.1
Curing Rate Profile *(Mix ratio of components A:B=1:1; 10 minutes @ 130°C)*			
T10	Alpha Rheometer	sec	29
T90			113
Typical Electrical Properties of Vulcanization *(Mix ratio of components A:B=1:1; Press cure: 10 minutes @ 150°C; Post cure 4 hours @ 200°C)*			
Volume Resistivity	Ω·cm	IEC 60093-1980	$2.5x10^{14}$
Dielectric Breakdown Voltage	KV/mm	IEC 60243-1:1998	26
Dielectric Constant	50 HZ	IEC 60250-1969	3.7
Dissipation Factor	50 HZ	IEC 60250-1969	0.016

* 22 hours @ 180°C

** In-house test method

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Typical property data values should not be used as specifications. Assistance and specifications are available by contacting Momentive Performance Materials Commercial Office.

HANDLING AND SAFETY

- Wear eye protection and protective gloves when handling this product.
- Cure only where appropriate ventilation systems exist.

STORAGE

- Store in a cool and dry place out of direct sunlight.
- Keep out of the reach of children.

PACKAGE

Both 40kg pail kits and 400kg drum kits are available.

NEVSil LSR TC330
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inventing possibilities