

SilSo Clear 21002 2 Part Optically Clear Liquid Silicone Rubber

Description

This is a two component silicone elastomer which crosslinks through polyaddition reaction. Particularly well suited for LSR applications and when processing with injection moulding equipment.

Key Features

- Convenient mixing 1:1 ratio for use in automatic dispensing equipment or hand mixing
- Contains no solvents
- Non-yellowing catalyst system
- Stable transmittance over time

Key Applications

- Injection molding
- Optical / magnifying lenses
- LED modules
- Solar collection products

Application

Silicone elastomer for optical injection moulding applications such as lenses, lightguides and LEDs.

Use and Cure Information

Mix components A and B in accordance with the mix ratio shown opposite according to weight. The material is usually processed with liquid injection moulding machines.

Crosslinking and the speed of cure can be controlled by reducing the temperature to slow down the reaction or increasing the temperature to speed it up.

A detailed rheometer report can be made available upon request.

Inhibition of the cure

Certain substances may impair or even completely prevent the curing behaviour of addition crosslinking silicone. Typical indications are sticky surfaces between silicone and contact surfaces.

The following substances are particularly critical:

- substances containing nitrogen (amines, polyurethanes, epoxy resins)
- substances containing sulphur (polysulphides, polysulphones, natural and synthetic rubbers (EPDM))
- organometal compounds (organotin compounds, vulcanisates and hardeners of condensation crosslinking silicones)

Health & Safety

Please observe our EC safety data sheets and the safety remarks on our container labels when handling our products. The dangerous goods regulations and the accident prevention regulations of the professional associations must be particularly observed. Keep the EC safety data sheet of the applied product at hand since it provides you with useful instructions for the safe use and disposal of the product as well as for actions to be taken in case of accidents

Safety Data Sheets available on request.

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Property

Uncured Product

Property	Test Method	Value
Color A		Clear
Color B		Clear
Cure Type		Addition
Density A	BS ISO 2781	1.03
Density B	BS ISO 2781	1.03
Mix Ratio By Weight		1:1
Pot Life mins at 23°C/73°F		> 24 hours mins
Self Bonding		No
Viscosity A	Brookfield	17,000 cP
Viscosity B	Brookfield	10,000 cP
Viscosity Mixed	Brookfield	13,500 cP

Cured Product

CTE Volumetric ppm/°C		960 ppm/°C
Color		Transparent, colorless
Density	BS ISO 2781	1.03 g/cm3
Elongation at Break	ISO 37	110 %
Hardness Shore A	ASTM D 2240-95	67
Linear Coefficient of Thermal Expansion (ppm/°C)		320 ppm/°C
Max Working Temp		204 °C / 399 °F
Min Working Temp		-55 °C / -67 °F
Refractive Index		1.41
Tensile Strength	ISO 37	9.31 N/mm2 / 1350 psi
Thermal Conductivity		0.18 W/mK

Electrical Properties

Dielectric Breakdown (kV/mm)		< 0.1% kV
Dielectric Strength kV/mm	ASTM D-149	18.7 kV/mm / 475 V/mil
Volume Resistivity (Ohms cm)	ASTM D-257	1.0E + 15 ohms cm

Storage

Max Storage Temperature		38 °C / 100 °F
Shelf Life		24 mths

The content set out in the technical data sheet does not contain information upon which you should rely. It is provided for general information purposes only and does not constitute a product specification. You must obtain professional or specialist advice before taking any action based on the information provided in the technical data sheet.

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The CHT technical service department is available to offer further information and advice and should it be needed to look at modifying current products or custom formulate a new one to meet your specific requirements. Please contact the technical service department.

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