

SilSo Lite 21045 Light weight Liquid Silicone Rubber (LSR) for Injection Moulding

Description

This is a 2-part addition cure silicone elastomer system for Liquid Injection Moulding (LSR). After mixing parts 'A' and 'B' in the correct proportions, the system will cure at elevated temperatures, usually in the range of 100 °C to 180 °C. The cycle time depends mainly on the temperature and the shape of the mould. The cured rubber exhibits excellent physical and electrical properties.

Key Features

- Crosslinking is followed by volume expansion (30-40%)
- Crosslinking can be accelerated by increasing the temperature
- Cured product is a light weight silicone foam.

Application

SilSo Lite 21045 is a Liquid Silicone Rubber (LSR) for Injection Moulding applications. Under heat crosslinking is followed by volume expansion of about 30-40%. Processing conditions of 3 min 150°C and subsequent postcure 1 h at 150°C have proven to be well suited. The cured endproduct is a silicone foam with closed pores, which can be used for various lightweight applications.

Use and Cure Information

IMPORTANT:

The 'A' part of product contains the platinum catalyst; great care should be taken when using automatic dispensing equipment. Please ensure that it is not contaminated by residual hydride containing rubber in the dispensing equipment, as curing will result. If in doubt, it's advised to thoroughly purge the equipment with a suitable hydrocarbon solvent or silicone fluid.

Mixing

LSR silicone elastomers usually have a very high viscosity, which is why automatic mixing and dosing equipment is recommended for mixing!

Inhibition of Cure

Great care must be taken when handling and mixing all addition cured silicone elastomer systems, ensuring that all the mixing tools (vessels, tubes and mixer) are clean and constructed in materials which do not interfere with the curing mechanism. The cure of the rubber can be inhibited by the presence of compounds of nitrogen, sulphur, phosphorus and arsenic; organotin catalysts and PVC stabilizers; epoxy resin catalysts and even contact with materials containing certain of these substances e.g. moulding clays, sulphur vulcanised rubbers, condensation cure silicone rubbers, onion and garlic.

Curing Conditions

LSR silicone elastomers do crosslink extremely slowly at room temperature. Temperatures greater than 100 °C are usually required to crosslink the materials in short time.

Health & Safety

Safety Data Sheets available on request.

Packaging

CHT Moulding Rubbers are available in a variety packaging including bulk containers. Please contact our sales department for more information.

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Property

Uncured Product

Property	Test Method	Value
Color A		white
Color B		white
Mix Ratio By Weight		1:1
Specific Gravity A		1.05
Specific Gravity B		1.05
Viscosity A	Brookfield HBTD	220.000 cP
Viscosity B	Brookfield HBTD	280.000 cP
Viscosity Mixed	Brookfield HBTD	250.000 cP

Cured Product

Property	Test Method	Value
Color		white
Elongation at Break	DIN 53 504, S 3 A	400 %
Foam Density		0.7 g/cc
Hardness Shore A	DIN 53 505	25
Tear Resistance (N/mm)	ASTM D 624, Die B	15 N/mm / 86 ppi
Tensile Strength	DIN 53 504, S 3 A	4 N/mm ² / 580 psi

Storage

Max Storage Temperature	30 °C °C / 86 °F
Shelf Life	12 mths

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