TECHNICAL DATA SHEET



Silcoset 105 2 part encapsulation and potting silicone

Description

This is a two-part, pourable, liquid silicone rubber which; with the addition of a curing agent will cure at room temperature to form a resilient silicone rubber. It remains flexible over the temperature a wide temperature range. It possesses excellent weathering resistance, is resistant to oxidation and to many oils and chemicals and exhibits very good electrical properties. Silcoset® is approved under the UK Ministry of Defence Air Materials Specification DTD 900

Key Features

- UK MOD approved to DTD 900/4721 and AFS 1980
- Flexible from -60°C/-76°F to +220°C/428°F
- Aerospace approved
- Good electrical isolation properties

Application

General purpose potting compound

Use and Cure Information

Mixing

The base rubber must be mixed thoroughly with CA28 to produce a uniformly cured product. Mixing can be carried out mechanically or by hand, but care should be taken to avoid trapping air in the mixture since this can cause voids in the cured rubber.

De-aeration

For applications where such voids are undesirable the mixture should be de-aerated under reduced pressure before use. The time and pressure required for de-aeration depends on the quantity of the base liquid being used. As a guide, 150g of base can be de-aerated in 5-10 minutes at a pressure of 30 to 50 mbar. Containers should be only two-thirds full to prevent overflow during the initial stages of de-aeration.

Curing

The curing process begins, without exotherm, immediately the liquid and curing agent are mixed together. Depending on the amount and type of curing agent used, the cure times may vary from less than thirty minutes and up to 24 hours. There is no significant change in the physical properties of the final rubber when the curing agent concentration is varied within the

Property	Test Method	Value
Uncured Product Cure Type De-mould Time / Full Cure a 23°C/73°F	t	Condensation 7 hrs
Density A Density B Mix Ratio By Weight Pot Life mins at 23°C/73°F Rheology	BS ISO 2781 BS ISO 2781	1.37 1.10 100:1 50 min mins Liquid
Viscosity Mixed	Brookfield	9000 cP
Cured Product 7 days at 23+/-2°C and 60+ 100% Modulus (N/mm2) CTE Volumetric ppm/°C Color Density Elongation at Break Hardness IRHD Linear Shrinkage (%) Max Working Temp Min Working Temp Tensile Strength Thermal Conductivity	/- 5% humidity BS ISO 2781 ISO 37 BS ISO 48 ISO 37	0.83 MPa / 120 psi 800 ppm/°C White 1.19 g/cm3 175 % 45 0.45 % 220 °C / 428 °F -50 °C / -58 °F 1.1 N/mm2 / 160 psi 0.2 W/mK
Electrical Properties Dielectric Constant Dielectric Strength (V/mil) Dissipation Factor Volume Resistivity (Ohms cm)	ASTM D-150 ASTM D-150 ASTM D-257	3.4 508 V/mil 0.005 5.8E+13 ohms cm
Storage Max Storage Temperature Shelf Life		40 °C / 104 °F 9 mths

recommended limits. (0.25 - 1 part of CA28 to 100 parts of Silcoset® by weight.) Alternative bulked catalysts are available and details are given on the individual technical data sheets. It is important to check the compatibility in preliminary tests if unknown substrates are used.

Health & Safety

Health and Safety Safety Data Sheets available on request.

Packaging

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

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