Silcoset® 101

Characterization

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 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.

The approval reference numbers are DTD 900/4721 and AFS 1980.

TECHNICAL DATA

	Silcoset® 101 A-Component	**CA28** B-Component		
Appearance	Visous Liquid			
Colour	Red	Clear		
SG	1.5	1.1		BS ISO 2781
Viscosity	45,000	300	mPa·s	Brookfield HBTD
	Catalysed Mass			
Mixing ratio	100 : 1			in weight shares
Cure Type	Condensation			
Rheology	Viscous Liquid			
Self-bonding	No			
Mixed Viscosity	40,000		mPa·s	Brookfield HBTD
Colour	Red			
Pot Life	60		Min.	
Max Cure at 25°C	4		h	

® = registered trademark

	Vulcanisate 7 days cure at 23°C +/- 2 °C and 60% +/-5% humidity		
CTE linear	236	ppm/°C	
CTE Volumetric	708	ppm/°C	
Duro Shore A	61		ASTM D 2240-95
Working Temp.	-60 to 250	°C	AFS-1540B
Tensile strength	4.77	MPa	ISO 37
Elongation	131	%	ISO 37
Modulus at 100% strain	4.18	MPa	
Tear	8.1	kN/m	ISO 34-1
Linear Shrinking	0.41	%	
SG	1.5		BS ISO 2781
Thermal Conductivity	0.37	W/m*K	
UL 94V-0	No		
	Electrical properties		
Dielectric Strength	20	kV/mm	
Permittivity	3		
Power Factor at 1MHz	0.0025		
Volume Resistivity	1.51E+14	Ohm*cm	ASTM D-257

The above given values are product describing data. Please consult the 'delivery specification' for binding product specifications. Further data about product properties, toxicological, ecological data as well as data relevant to safety can be found in the safety data sheet.

Storability / Storage

With a proper storage approx. 7 months if stored properly max. at 30 °C and protected from frost in a dry place in closed original containers.

Properties

-High temperature resistance
-Aerospace approved
-Ideal for low melt metal alloy casting
-Good flow properties

Application Technique

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.

Deaeration

For applications where such voids are undesirable the mixture should be deaerated under reduced pressure before use. The time and pressure required for deaeration depends on the quantity of the base liquid being used. As a guide, 150 g of base can be deaerated within 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 deaeration.

Curing

The curing process begins, without exotherm, immediately when 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 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 absolutely important to check the compatibility in preliminary tests if unknown substrates are used.

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.

We reserve the right to modify the product and technical leaflet.

Our department for applied technique is always at your service for further information and advice.

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CHT Germany GmbH
Postfach 12 80, 72002 Tübingen, Bismarckstraße 102, 72072 Tübingen, Deutschland
Telephone: 07071/154-0, Fax: 07071/154-290, Email: info@cht.com, Homepage: www.cht.com