

QSi12

20:1 Condensation cure silicone encapsulant clear

Introduction

This is a 2-component, silicone elastomer system specially designed for electronic potting and encapsulation applications. It offers good protection against chemicals, environmental contamination, mechanical shock, vibration and impact damage. It can be employed in areas where low flammability is a prerequisite. The cured elastomer can be repaired. The component parts have relatively low viscosities and are readily mixed either by hand or machine

Key Features

- Optically Clear
- Accelerated cure with heat
- Low Viscosity
- Good deep section cure

Use and Cure Information

The product is supplied as two components 'A' and 'B'. These components should be mixed together in the ratio by weight shown opposite. Mixing can be done by hand or by automated dispensing machine using a static mixer nozzle. A nozzle of at least 9 GXF type elements is recommended for uniform mixing of both components.

The dispensing machine mix ratios should be adjusted if mixing by volume and not weight. **IMPORTANT** the mixed components will cure in the nozzle so to preserve nozzles a continuous process is required or a change of nozzle after the task is completed. Complete mixing of each component is achieved within the first 50-60% of the nozzle.

Mixing

Both the 'A' and 'B' parts should be well stirred to ensure the material is uniform and any settlement of the fillers have been remixed.

Place the required amount of 'A' and 'B' parts by weight at the mix ratio shown opposite, in a clean plastic or metal container of approximately 3 times their volume, and mix until the colour of the mixture is uniform. For best results, we recommend degassing. Degas by intermittent evacuation, the larger volume of the mixing vessel helps prevent overflow during this operation. In case of automatic dispensing with static mixing head, the two components should be degassed before processing. Recommended vacuum conditions are 30-50 mbar intermittently over 5-10 minutes. Cast the mixture either by gravity or pressure injection.

Health and Safety

Safety Data Sheets available on request.

Packaging

ACC Encapsulants are available in a variety packaging including bulk containers. Please contact our sales department for more information.

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Property	Test Method	Value
Uncured product		
Appearance		Clear Liquid
Colour A Part		Transparent
Colour B Part		Transparent
Cure Type		Condensation
Max Cure Hrs @ 25 °C		16 hrs
Mix Ratio		20:1
Pot Life mins		120 mins
Rheology		Liquid
Self Bonding		No
Viscosity A-Part mPas	Brookfield	1400 mPas
Viscosity B-Part mPas	Brookfield	15 mPas
Viscosity Mixed mPas	Brookfield	1100 mPas
Cured product		
CTE Linear ppm/°C		300 ppm/°C
CTE Volumetric ppm/°C		900 ppm/°C
Colour		Transparent
Duro Shore A	ASTM D 2240-95	19
Linear Shrinkage %		1 %
Max Working Temp +°C	AFS_1540B	220 °C
Min Working Temp - °C		-50 °C
SG	BS ISO 2781	0.99
After 3 days cure at 23°+/-2°C and 50+/-5% humidity		
Thermal Conductivity W/mK		0.18 W/mK
UL 94V-0		No
Storage		
Max storage temperature °C		38 °C
Shelf life		6 mths
Electrical properties		
Dielectric Constant @ 1kHz	ASTM D-150	3
Dielectric Strength kV/mm	ASTM D-149	>17 kV/mm
Dissipation Factor @ 1kHz	ASTM D-150	0.001
Volume Resistivity ohms cm	ASTM D-257	1.0E+13 ohms cm

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