Technical Data Sheet

QSil12

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**