TECHNICAL DATA SHEET



40 °C / 104 °F

6 mths

SE2011 2 part encapsulation and potting silicone

Description	Property	Test Method	Value
This	Uncured Product		
is a self-bonding 2-component, silicone elastomer system	Cure Type		Condensation
specially designed for electronic potting and encapsulation applications. It offers good protection against chemicals,	De-mould Time / Full Cure at 23°C/73°F		2 hrs
environmental contamination, mechanical shock, vibration and impact damage. It can be employed in areas where low	Density A	BS ISO 2781	1.05
flammability is a prerequisite. The cured elastomer can be	Density B	BS ISO 2781	0.83
repaired. The component parts have relatively low viscosities and	Mix Ratio By Weight		10:1
are readily mixed either by hand or machine.	Pot Life mins at 23°C/73°F		20 min mins
This silicone elastomer has the benefit of developing chemical	Rheology		Liquid
adhesion to a variety of substrates and is compatible with many	Self Bonding		Yes
sensitive substrates including copper, brass, steel, aluminium, FR4, and plastics making this an ideal option where fast curing	Viscosity A	Brookfield	4400 cP
and adhesion are needed without the use of a primer.	Viscosity B	Brookfield	100 cP
Key Features	Viscosity Mixed	Brookfield	4000 cP
Adhesive at room temperature	•		
Fast curing at room temperature	Cured Product		
Low viscosityUL recognised in file No. E334038	7 days at 23+/-2°C and 50+/	-5% humidity	
Application	CTE Volumetric ppm/°C		837 ppm/°C
••	Color		Black
Junction box potting for solar / photovoltaic cells Use and Cure Information	Density	BS ISO 2781	1.08 g/cm3
	Elongation at Break	ISO 37	270 %
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	Hardness Shore A	ASTM D 2240- 95	23
dispensing machine using a static mixer nozzle. A nozzle of at least 9 GXF type elements is recommended for uniform mixing of	Linear Coefficient of Thermal Expansion (ppm/°C)		279 ppm/°C
both components.	Linear Shrinkage (%)		2.8 %
The dispensing machine mix ratios should be adjusted if mixing	Max Working Temp		220 °C / 428 °F
by volume and not weight. IMPORTANT the mixed components will cure in the nozzle so to preserve nozzles a continuous	Min Working Temp		-50 °C / -58 °F
process is required or a change of nozzle after the task is	Tensile Strength	ISO 37	0.9 N/mm2 / 131 psi
completed. Complete mixing of each component is achieved	Thermal Conductivity		0.2 W/mK
within the first 50-60% of the nozzle.	UL File No.		E334038
Mixing	Youngs Modulus (N/mm2)		0.29 N/mm2 / 42 psi
Both the 'A' and 'B' parts should be well stirred to ensure the	Electrical Properties		
material is uniform and any settlement of the fillers have been remixed.	Dielectric Constant	ASTM D-150	3.28
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	Dielectric Strength kV/mm	ASTM D-149	23.4 kV/mm / 594 V/mil
approximately 3 times their volume, and mix until the colour of the	Dissipation Factor	ASTM D-150	0.029
mixture is uniform. For best results, we recommend degassing. Degas by intermittent evacuation, the larger volume of the mixing	Volume Resistivity (Ohms cm)	ASTM D-257	1.09E+14 ohms cm

injection. Adhesion

Ensure all substrates are clean are free of surface contaminates. A Solvent degreaser is recommended for metallic substrates and Isopropanol solvent is recommended for plastics and polycarbonates. A mechanical bond to the substrates will develop shortly after applying. A chemical bond will develop after 24 hours and maximum adhesion is reached after 7 days.

Storage

Shelf Life

Max Storage Temperature

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.

vessel helps prevent overflow during this operation. In case of automatic dispensing with static mixing head, the two

Recommended vacuum conditions are 30-50 mbar intermittently

over 5-10 minutes. Cast the mixture either by gravity or pressure

components should be degassed before processing.

Packaging

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

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