

SE2011 2 part encapsulation and potting silicone

Description	Property	Test Method	Value
This	Uncured Product		Condensation
is a self-bonding 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.	Cure Type		2 hrs
This silicone elastomer has the benefit of developing chemical adhesion to a variety of substrates and is compatible with many sensitive substrates including copper, brass, steel, aluminium, FR4, and plastics making this an ideal option where fast curing and adhesion are needed without the use of a primer.	De-mould Time / Full Cure at 23°C/73°F		1.05
Key Features	Density A	BS ISO 2781	0.83
<ul style="list-style-type: none"> Adhesive at room temperature Fast curing at room temperature Low viscosity UL recognised in file No. E334038 	Density B	BS ISO 2781	10:1
Application	Mix Ratio By Weight		20 min mins
Junction box potting for solar / photovoltaic cells	Pot Life mins at 23°C/73°F		Liquid
Use and Cure Information	Rheology		Yes
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.	Self Bonding		4400 cP
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.	Viscosity A	Brookfield	100 cP
Mixing	Viscosity B	Brookfield	4000 cP
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.	Viscosity Mixed	Brookfield	
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.	Cured Product		
Recommended vacuum conditions are 30-50 mbar intermittently over 5-10 minutes. Cast the mixture either by gravity or pressure injection.	7 days at 23+/-2°C and 50+/-5% humidity		837 ppm/°C
Adhesion	CTE Volumetric ppm/°C		Black
Ensure all substrates are clean are free of surface contaminates. A Solvent degreaser is recommended for metallic substrates and Iso-propanol 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.	Color		1.08 g/cm3
It is important to check the compatibility in preliminary tests if unknown substrates are used.	Density	BS ISO 2781	270 %
Health & Safety	Elongation at Break	ISO 37	23
Health and Safety	Hardness Shore A	ASTM D 2240-95	279 ppm/°C
Safety Data Sheets available on request.	Linear Coefficient of Thermal Expansion (ppm/°C)		2.8 %
Packaging	Linear Shrinkage (%)		220 °C / 428 °F
CHT Encapsulants are available in a variety packaging including bulk containers. Please contact our sales department for more information.	Max Working Temp		-50 °C / -58 °F
	Min Working Temp		0.9 N/mm2 / 131 psi
	Tensile Strength	ISO 37	0.2 W/mK
	Thermal Conductivity		E334038
	UL File No.		0.29 N/mm2 / 42 psi
	Youngs Modulus (N/mm2)		
	Electrical Properties		
	Dielectric Constant	ASTM D-150	3.28
	Dielectric Strength kV/mm	ASTM D-149	23.4 kV/mm / 594 V/mil
	Dissipation Factor	ASTM D-150	0.029
	Volume Resistivity (Ohms cm)	ASTM D-257	1.09E+14 ohms cm
	Storage		
	Max Storage Temperature		40 °C / 104 °F
	Shelf Life		6 mths

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