

## SE2011 2-Part Adhesive Potting Compound

### Introduction

SE2011 is a two part, non-corrosive, condensation curing, liquid silicone adhesive potting compound, specifically designed to provide fast cure and adhesion and room temperature. It features a convenient mixing ratio of 10 to 1 by volume or 11 to 1 by weight for machinery dispensing, excellent adhesion and compatibility with many sensitive substrates including copper, brass, steel, aluminium, FR4, and plastics making this an ideal option where fast curing and adhesion are needed.

### Key Features

- Adhesive at room temperature
- Fast curing at room temperature
- Low viscosity
- UL listed in file No. E334038

### Use and Cure Information

#### How to Use

SE2011 is supplied as two components, SE2011A and SE2011B packaged in a kits of 10 to 1 by weight. SE2011 is also suitable for machine dispensing. The dispensing machine must be set to deliver 10 parts of A and 1 part of B by VOLUME, through a static mixing nozzle and then applied to the substrate. 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. A nozzle of at least 9 GXF type elements is recommended for uniform mixing of both components. Dispensing by weight requires 11 parts of A and 1 part of B.

Automated dispensing machinery is available through ACC silicones, please discuss with your Regional Sales Manager.

#### Application and Cure

Ensure the surface is clean and dry (recommend using ACC Degrease or Isopropanol) before applying the SE2011 package. Complete mixing of each component is achieved within the first 50-60% of the nozzle. The extruded sealant should be applied to the substrate immediately.

#### Adhesion

Ensuring all substrates are clean are free of surface contaminants. ACC 52 degreaser is recommended for metallic substrates and iso-propanol solvent is recommended for plastics and polycarbonates. SE2011 will develop a mechanical bond to the substrates within 50 minutes of applying. A chemical bond will develop after 24 hours and maximum adhesion is reached after 7 days

Overlap Shear Strength:	ASTM D 1002	kg/cm <sup>2</sup>
Copper		5.94
Aluminium		3.95

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### Property

#### Uncured Products

Property	Test Method	Value
Colour:	A Part	Black
	B Part	Clear
Appearance:	A Part	Liquid
	B Part	Liquid
SG:	A Part	1.10
	B Part	0.96
Viscosity	A Part Brookfield	4400 mPa.s
Viscosity	B Part Brookfield	100 mPa.s
Extrusion rate from a 265 ml 10 to 1 Cartridge at 87 PSI, g / minute		105
Pot Life:		20 minutes *
Cure time to handle		2 hours*

\* measured at 23+/-2°C and 45 to 50% relative humidity.

#### Cured Properties at 23+/-2°C and 45 to 55% Humidity

Property	1 Day	7 Days
Hardness Shore A	17	23

#### Cured Elastomer

##### (After 7 days cure at 23+/-2°C and 45 to 55% humidity)

Tensile Strength:	BS903 Part A2	0.90 MPa
Elongation at Break:	BS903 Part A2	270 %
Youngs Modulus:		0.23 MPa
Hardness:	ASTM D 2240-95	23 Shore A
Specific Gravity:	BS 903 Part A1	1.08
Thermal Conductivity:		0.20 W/mK
Coefficient of Thermal Expansion:		
Volumetric		837 ppm / °C
Linear		279 ppm / °C
Min. Service Temperature:		-50 °C
Max. Service Temperature:	AFS 1540B	+220 °C
Flame Rating		UL94-HB

#### Heat Accelerated Aged Properties, 220°C for 8 Days

Tensile Strength:	BS903 Part A2	0.80 MPa
Elongation at Break:	BS903 Part A2	96 %
Youngs Modulus:		0.63 MPa
Hardness:	ASTM D 2240-95	32 Shore A

#### Electrical Properties

Volume Resistivity:	ASTM D-257	1.09E+14Ω.cm
Dielectric Constant at 1MHz	ASTM D-150	3.21
Dissipation Factor at 60Hz	ASTM D-150	0.0279
Dissipation Factor at 1MHz	ASTM D-150	0.0041

**Health and Safety** - Material Safety Data Sheets available on request

**Packages** – SE2011 is available in 10 to 1 kit sizes, please contact your Regional Sales manager for more information.

**Storage and Shelf Life** – Expected to be 6 months in original, unopened containers below 40°C.

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