

AS1701 1 Part Non-Corrosive Neutral Cure Adhesive Sealant (Electronic Grade)

Description

This is a non-corrosive, neutral cure, 1-part, RTV (Room Temperature Vulcanising) silicone adhesive sealant. It is one in a range of Alkoxy cure products which are solvent free. It exhibits excellent primerless adhesion to many substrates and cures at room temperature when in contact with atmospheric moisture to form a tough rubber. This product will not corrode copper or its alloys and is suitable for use with electronic components.

Key Features

- Non corrosive
- Excellent adhesion to most substrates
- Fast skinning
- Non slumping paste

Application

Vibration damping and board coating e.g. voltage regulators

Use and Cure Information

This product is a ready for use 1 Part system. If supplied in cartridges it can be applied using either manual or pneumatic dispensing guns. It can also be applied from bulk containers using conventional drum dispensing equipment.

All surfaces to which the sealant is to be applied should be clean, dry and free from grease, dirt, and loose material. Priming of surfaces is not normally required. If using as an adhesive, it should be applied to one clean surface and the other clean surface brought into contact with it within the tack free time stated opposite. For optimum bond strength, the thickness of the sealant joint should be a minimum of 1 mm.

The sealant will cure upon exposure to atmospheric moisture, ideally between 20 to 30 °C and 40% to 70% Relative Humidity. Time taken for cure will depend on the thickness of the joint, humidity and temperature. Joints should be left undisturbed for at least 24 hours, but preferably longer to effect sufficient depth of cure. Full cure requires 7 days.

"For pneumatic dispensing of 310 ml cartridges, the recommended pressure is 2.25 to 3.45 bar (40 to 50 psi). Dispensing pressure above the recommended limits may lead to gas bypassing the piston, causing spluttering at the nozzle and poor bead quality"

It is important to check the compatibility in preliminary tests if unknown substrates are used.

Health & Safety

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Safety Data Sheets available on request.

Packaging

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

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Property

Uncured Product

Property	Test Method	Value
Cure Profile		23+/-2°C and 50+/-5% humidity
Cure Through to 3 mm Depth		24 hr
Cure Type		Alkoxy
Rheology		Paste
Self Bonding		Yes
Tack Free Time / Skin Formation at 23°C/73°F		3 min

Cured Product

7 days at 23+/-2°C and 50+/-5% humidity

100% Modulus (N/mm2)		2.1 MPa / 305 psi
Color		Black
Density	BS ISO 2781	1.28 g/cm3
Elongation at Break	ISO 37	200 %
Hardness Shore A	ASTM D 2240-95	52
Linear Coefficient of Thermal Expansion (ppm/°C)		230 ppm/°C
Linear Shrinkage (%)		1 %
Max Working Temp		220 °C / 428 °F
Min Working Temp		-50 °C / -58 °F
Tear Resistance (N/mm)	BS ISO 34-1	19.1 N/mm / 110 ppi
Tensile Strength	ISO 40	2.35 N/mm2 / 341 psi
Thermal Conductivity		0.6 W/mK
Volume Coefficient of Thermal Expansion (ppm/°C)		690 ppm/°C
Youngs Modulus (N/mm2)		1.8 N/mm2 / 261 psi

Electrical Properties

Dielectric Breakdown (kV/mm)		33.33 kV
Dielectric Constant	ASTM D-150	2.92
Dielectric Strength (V/mil)		>457 V/mil
Dielectric Strength kV/mm	ASTM D-149	>18 kV/mm / 0 V/mil
Dissipation Factor	ASTM D-150	0.0012
Volume Resistivity (Ohms cm)	ASTM D-257	7.85E+15 ohms cm

Adhesion Testing

Lap Shear Aluminium kg/cm ²	ASTM D1002	10.78 kg/cm ²
Lap Shear Copper kg/cm ²	ASTM D1002	10.06 kg/cm ²
Lap Shear Polycarbonate Steel kg/cm ²	ASTM D1002	5.93 kg/cm ²
Lap Shear Stainless Steel 304 kg/cm ²	ASTM D1002	2.98 kg/cm ²

Storage

Max Storage Temperature	40 °C / 104 °F
Shelf Life	12 mths

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