TECHNICAL DATA SHEET

AS1700
1 Part Non-Corrosive Neutral Cure Adhesive Sealant and Coating (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
- Excellent dielectric and isolating properties
- Low odour

Application

Fibre Optic Cables

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 ºC 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 prelimininary 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.

Revision Date	29 Apr 2021
Revision No	1
Download Date	17 May 2024

Property	Test Method	Value
Uncured Product		
Appearance		**Thixotropic paste**
Cure Profile		**23+/-2°C and 50+/-5% humidity**
Cure Through to 3 mm Depth		**36 hr**
Cure Type		**Alkoxy**
Extrusion Rate g/min		**290 g/min**
Rheology		**Paste**
Self Bonding		**Yes**
Slump		**1 mm/5mins**
Tack Free Time / Skin Formation at 23°C/73°F		**10 min**
Cured Product		
7 days at 23+/-2°C and 50+/-5% humidity		
100% Modulus (N/mm2)		**0.61 MPa / 88 psi**
Color		**Translucent**
Density	BS ISO 2781	**1.1 g/cm3**
Elongation at Break	ISO 37	**545 %**
Hardness Shore A	ASTM D 2240-95	**30**
Linear Coefficient of Thermal Expansion (ppm/°C)		**270 ppm/°C**
Linear Shrinkage (%)		**1 %**
Max Working Temp		**200 °C / 392 °F**
Min Working Temp		**-50 °C / -58 °F**
Tear Resistance (N/mm)	BS ISO 34-1	**12.3 N/mm / 70 ppi**
Tensile Strength	ISO 37	**2.43 N/mm2 / 352 psi**
Thermal Conductivity		**0.2 W/mK**
Volume Coefficient of Thermal Expansion (ppm/°C)		**810 ppm/°C**
Youngs Modulus (N/mm2)		**0.54 N/mm2 / 78 psi**
Electrical Properties		
Dielectric Constant	ASTM D-150	**3**
Dielectric Strength (V/mil)		**457 V/mil**
Dielectric Strength kV/mm	ASTM D-149	**18 kV/mm / 457 V/mil**
Dissipation Factor	ASTM D-150	**0.0025**
Volume Resistivity (Ohms cm)	ASTM D-257	**2.20E+15 ohms cm**
Adhesion Testing		
Lap Shear Aluminium kg/cm²	ASTM D1002	**4.00 kg/cm²**
Lap Shear Copper kg/cm²	ASTM D1002	**3.98 kg/cm²**
Lap Shear Polycarbonate Steel kg/cm²	ASTM D1002	**5.22 kg/cm²**
Lap Shear Stainless Steel 304 kg/cm²	ASTM D1002	**3.04 kg/cm²**
Storage		
Max Storage Temperature		**40 °C / 104 °F**
Shelf Life		**12 mths**

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