

AS1803 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 Acetone cure products which are solvent free. It exhibits excellent primerless adhesion to many substrates and cures rapidly 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

- UL recognised in file No. E334038
- Good thermal conductivity
- Non corrosive
- Fast skinning

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"

Health & Safety

Health and Safety

Safety Data Sheets available on request.

Packaging

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

Users are advised to carry out their own tests on clean, degreased substrates to ensure satisfactory adhesion is achieved.

Stress cracking can appear on some grades of polycarbonate and poly(methyl methacrylate). Users are advised to carry out initial testing to ensure product compatibility.

Revision Date 10 Jan 2022
Revision No 2
Download Date 08 Jul 2022

Property

Uncured Product

Cure Profile

Cure Through to 3 mm Depth
Cure Type
Rheology
Self Bonding
Tooling Time at 23°C/73°F

Test Method

Value

23+/-2°C and 50+/-5% humidity
8 hr
Acetone Paste
Yes
4

Cured Product

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

100% Modulus (N/mm²) 0.5 MPa / 73 psi
Color White
Density BS ISO 2781 2.24 g/cm³
Elongation at Break ISO 37 94 %
Hardness Shore A ASTM D 2240-95 65
Linear Coefficient of Thermal Expansion (ppm/°C) 198 ppm/°C
Linear Shrinkage (%) 1 %
Max Working Temp 220 °C / 428 °F
Min Working Temp -50 °C / -58 °F
Tensile Strength ISO 37 2.8 N/mm² / 406 psi
Thermal Conductivity 1.55 W/mK
UL File No. E334038
Volume Coefficient of Thermal Expansion (ppm/°C) 475 ppm/°C
Youngs Modulus (N/mm²) 0.4 N/mm² / 58 psi

Electrical Properties

Dielectric Constant ASTM D-150 4.9
Dielectric Strength (V/mil) 508 V/mil
Dielectric Strength kV/mm ASTM D-149 39 kV/mm / 991 V/mil
Dissipation Factor ASTM D-150 0.009
Volume Resistivity (Ohms cm) ASTM D-257 1.00E+14 ohms cm

Adhesion Testing

Lap Shear Aluminium kg/cm² ASTM D1002 6 kg/cm²
Lap Shear Copper kg/cm² ASTM D1002 3 kg/cm²
Lap Shear Stainless Steel 304 kg/cm² ASTM D1002 2.6 kg/cm²

Storage

Max Storage Temperature 40 °C / 104 °F
Shelf Life 9 in cartridges 12 in pails drums mths

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