

AS1707

One Part Thermally conductive adhesive

Introduction

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

- Excellent Thermal Conductivity
- Non-corrosive by-products of cure
- Aluminium Nitride free

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 and Safety

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	Test Method	Value
Uncured product		
Appearance		Thixotropic Paste
Colour A Part		Grey
Cure Type		Alkoxy
Extrusion Rate g/min		104 g/min
Max Cure Hrs @ 25 °C		48 hrs
Rheology		Paste
SG A Part	BS ISO 2781	2.95
Self Bonding		yes
Slump		22 mm/5mins
Tack Free Time mins		10 mins
Cured product		
Colour		Grey
Duro Shore A	ASTM D 2240-95	84
Elongation %	ISO 37	11 %
Max Working Temp + °C	AFS_1540B	230 °C
Min Working Temp - °C		65 °C
Modulus Youngs MPa		23 MPa
SG	BS ISO 2781	2.95
Tensile MPa	ISO 37	1.82 MPa
Thermal Conductivity W/mK		3.27 W/mK
Electrical properties		
Volume Resistivity ohms cm	ASTM D-257	1.26 10E +14 ohms cm
Adhesion testing		
Lap Shear Aluminium kg/cm ²	ASTM D1002	13.1 kg/cm²
Storage		
Max storage temperature °C		40 °C
Shelf life		12 mths

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