

AS1603 1 Part Low Corrosive Industrial Sealant

Description

This is a 1-part, RTV (Room Temperature Vulcanising) silicone adhesive sealant. It is one in a range of Oxime cure products which are solvent free. It exhibits good primerless adhesion to many substrates especially plastics and cures rapidly at room temperature when in contact with atmospheric moisture. This product can be described as low corrosive but would not be recommended for use with copper or its associated alloys.

Key Features

- Thixotropic paste
- Low corrosive
- Primerless adhesion to many substrates
- Low odour

Application

Suitable for but not limited to aviation and aerospace applications

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 packaging including cartridges and bulk containers. Please contact our sales department for more information.

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Revision No 2
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Property

Uncured Product

Property	Test Method	Value
Appearance		Thixotropic paste
Cure Profile		23+/-2°C and 50+/-5% humidity
Cure Through to 3 mm Depth		12 hr
Cure Type		Oxime
Extrusion Rate g/min		390 g/min
Rheology		Paste
Self Bonding		Yes
Tack Free Time / Skin Formation at 23°C/73°F		5 min

Cured Product

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

100% Modulus (N/mm2)		0.8 MPa / 116 psi
Color		Translucent
Density	BS ISO 2781	1.07 g/cm3
Elongation at Break	ISO 37	300 %
Hardness Shore A	ASTM D 2240-95	33
Linear Coefficient of Thermal Expansion (ppm/°C)		295 ppm/°C
Linear Shrinkage (%)		0.8 %
Max Working Temp		220 °C / 428 °F
Min Working Temp		-50 °C / -58 °F
Tear Resistance (N/mm)	BS ISO 34-1	4.8 N/mm / 27 ppi
Tensile Strength	ISO 37	2.15 N/mm2 / 312 psi
Thermal Conductivity		0.2 W/mK
Volume Coefficient of Thermal Expansion (ppm/°C)		888 ppm/°C
Youngs Modulus (N/mm2)		0.6 N/mm2 / 87 psi

Electrical Properties

Dielectric Constant	ASTM D-150	3
Dielectric Strength (V/mil)		457 V/mil
Dielectric Strength kV/mm	ASTM D-149	32 kV/mm / 813 V/mil
Dissipation Factor	ASTM D-150	0.0025
Volume Resistivity (Ohms cm)	ASTM D-257	8.7E+15 ohms cm

Adhesion Testing

Lap Shear Aluminium kg/cm ²	ASTM D1002	4.15 kg/cm ²
Lap Shear Stainless Steel 304 kg/cm ²	ASTM D1002	3.52 kg/cm ²

Storage

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

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