

# AS1727

## 1 Part RTV silicone adhesive low outgassing non corrosive

### Introduction

This product is part of a range of low outgassing products and is a non-corrosive, neutral cure, 1-part, RTV (Room Temperature Vulcanising) silicone adhesive sealant. It is a specially formulated and designed to meet the corrosion resistance requirements of MIL-A-46146B. It features fast curing, exceptionally low volatile content and is compatible with many sensitive substrates including copper, brass, steel, aluminium, polycarbonates, acrylics and FR4, making this an ideal option for many electronic and lighting applications. The Alkoxy cure system produces a silicone sealant with excellent adhesion to most common substrates.

### Key Features

- Meets the corrosion resistance requirements of MIL A-46146B
- Low volatile content
- Fast curing
- Adhesion to many substrates

### 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.

Revision Date : 12/09/2018

Download Date : 05/08/2019

### Property

#### Uncured product

Property	Test Method	Value
Appearance		Liquid
Cure Type		Alkoxy
FDA	CFR (21) 177.2600	No
Max Cure Hrs @ 25 °C		24 hrs
Rheology		Liquid
Self Bonding		Yes
Tack Free Time mins		10 mins
Viscosity A-Part mPas	Brookfield	3400 mPas

#### Cured product

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

CTE Linear ppm/°C		291 ppm/°C
CTE Volumetric ppm/°C		874 ppm/°C
Colour		Black
Duro Shore A	ASTM D 2240-95	36
Elongation %	ISO 37	125 %
Max Working Temp +°C	AFS_1540B	200 °C
Min Working Temp - °C		-62 °C
SG	BS ISO 2781	1.04
Tensile MPa	ISO 37	1.00 MPa
Thermal Conductivity W/mK		0.2 W/mK
Volatile Content ppm		<1000 ppm

#### Storage

Max storage temperature °C		40 °C
Shelf life		12 mths

#### Electrical properties

Dielectric Constant @ 1kHz	ASTM D-150	2.6
Dielectric Strength kV/mm	ASTM D-149	>18 kV/mm
Dissipation Factor @ 1kHz	ASTM D-150	0.003
Volume Resistivity ohms cm	ASTM D-257	1.03E+15 ohms cm

#### Adhesion testing

Lap Shear Aluminium kg/cm <sup>2</sup>	ASTM D1002	5 kg/cm <sup>2</sup>
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