

## AS1703

### 1 Part RTV silicone adhesive paste 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

ACC 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

##### Uncured product

Appearance  
Cure Type  
Extrusion Rate g/min  
FDA  
Max Cure Hrs @ 25 °C  
Rheology  
Self Bonding  
Tack Free Time mins

#### Test Method

CFR (21) 177.2600

#### Value

**Thixotropic paste**  
**Alkoxy**  
**200 g/min**  
**No**  
**10 hrs**  
**Paste**  
**Yes**  
**6 mins**

##### Cured product

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

CTE Linear ppm/°C **271 ppm/°C**  
CTE Volumetric ppm/°C **812 ppm/°C**  
Colour **Translucent**  
Duro Shore A **34**  
Elongation % **200 %**  
Max Working Temp +°C **200 °C**  
Min Working Temp - °C **-62 °C**  
SG **1.11**  
Tensile MPa **2 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 **2.5**  
Dielectric Strength kV/mm **>18 kV/mm**  
Dissipation Factor @ 1kHz **0.004**  
Volume Resistivity ohms cm **2.00E+15 ohms cm**

##### Adhesion testing

Lap Shear Aluminium kg/cm<sup>2</sup> **8.7 kg/cm<sup>2</sup>**

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