

## AS1745T 1 Part Non-Corrosive Neutral Cure Adhesive Sealant (Electronic Grade)

### Description

This product is part of a range of high performance RTV's. It is a neutral cure silicone sealant specifically designed to meet the physical, chemical and temperature resistant requirements of MIL-A-46146B. It features exceptional physical properties and is compatible with many sensitive substrates including copper, brass, steel, aluminium and FR4, making this an ideal option for many electronic applications where high performance is paramount. The Alkoxy cure system produces a silicone sealant with excellent adhesion to most common substrates.

### Key Features

- MIL 46146B physical / chemical requirements
- High mechanical strength
- Contains UV tracer for visual inspection
- Non slumping adhesive paste

### Application

Aerospace and engineering

### 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.

Revision Date      29 Apr 2021  
Revision No        1  
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### Property

#### Uncured Product

Property	Test Method	Value
Appearance		<b>Thixotropic paste</b>
Cure Profile		<b>23+/-2°C and 50+/-5% humidity</b>
Cure Through to 3 mm Depth		<b>72 hr</b>
Cure Type		<b>Alkoxy</b>
Extrusion Rate g/min		<b>116 g/min</b>
Rheology		<b>Paste</b>
Self Bonding		<b>Yes</b>
Slump		<b>1 mm/5mins</b>
Tack Free Time / Skin Formation at 23°C/73°F		<b>45 min</b>
UV Trace		<b>Yes</b>

#### Cured Product

Property	Test Method	Value
<b>7 days at 23+/-2°C and 50+/-5% humidity</b>		
Color		<b>Translucent</b>
Density	BS ISO 2781	<b>1.16 g/cm<sup>3</sup></b>
Elongation at Break	ISO 37	<b>775 %</b>
Hardness Shore A	ASTM D 2240-95	<b>35</b>
Linear Coefficient of Thermal Expansion (ppm/°C)		<b>267 ppm/°C</b>
Max Working Temp		<b>200 °C / 392 °F</b>
Min Working Temp		<b>-62 °C / -80 °F</b>
Tear Resistance (N/mm)	BS ISO 34-1	<b>29.8 N/mm / 172 ppi</b>
Tensile Strength	ISO 37	<b>6.9 N/mm<sup>2</sup> / 1001 psi</b>
Thermal Conductivity		<b>0.2 W/mK</b>
Volume Coefficient of Thermal Expansion (ppm/°C)		<b>800 ppm/°C</b>

#### Electrical Properties

Dielectric Constant	ASTM D-150	<b>2.49</b>
Dielectric Strength (V/mil)		<b>457 V/mil</b>
Dielectric Strength kV/mm	ASTM D-149	<b>18 kV/mm / 457 V/mil</b>
Dissipation Factor	ASTM D-150	<b>0.0007</b>
Volume Resistivity (Ohms cm)	ASTM D-257	<b>4.71E+15 ohms cm</b>

#### Adhesion Testing

Lap Shear Aluminium kg/cm <sup>2</sup>	ASTM D1002	<b>7.83 kg/cm<sup>2</sup></b>
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#### Storage

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

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