

AS1721 (ESP484) 1 Part neutral self levelling adhesive sealant

Introduction

AS1721 is a specially formulated neutral cure silicone sealant designed for use with sensitive electronic assemblies. It is described as an alkoxy 1-part room temperature vulcanising (RTV) silicone sealant. The Alkoxy cure system produces a silicone sealant with excellent adhesion to most common substrates

Key Features

- Good adhesion to most substrates
- Non corrosive
- Low odour
- Controlled flow properties

Use and Cure Information

Typical Applications

- Assembly of electrical and electronic equipment
- Sealing of corrosion sensitive devices
- Shallow encapsulation of small circuits and connectors

Application and Cure

After removal of the package seal the product is ready for use. It can be applied manually or using a pneumatic caulking gun. Following exposure to atmospheric moisture the product begins to cure to a resilient, durable silicone elastomer. Full cure will depend on the relative humidity and ambient temperature. At 20 to 30°C and 40 to 70% Relative Humidity a 3mm section will normally cure in less than 24 hours.

The volatile by-products of the curing mechanism are relatively inoffensive alcohols.

(See Health and Safety Data)

Full bond strength and physical properties will be achieved in 7 days.

Cure time depends on the thickness of sealant applied and the area exposed to the atmosphere.

It is recommended that a minimum thickness of 1 mm is achieved between parts to obtain best adhesion to substrates.

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Property

Uncured Product

Property	Test Method	Value
Colour:		Black
Appearance:		Viscous liquid
Tack Free Time:		10 minutes *
3mm Cure Through:		<36 hours *
Extrusion Rate:		g / minute
Viscosity		<95000 mPas

* measured at 23+/-2°C and 65% relative humidity.

Cured Elastomer

(after 7 days cure at 23+/-2°C and 65% relative humidity)

Tensile Strength:	BS903 Part A2	1.21 MPa
Elongation at Break:	BS903 Part A2	320 %
Youngs Modulus:		0.27 MPa
Modulus at 100% Strain:	BS903 Part A2	0.39 MPa
Tear Strength:	BS903 Part A3	kN/m
Hardness:	ASTM D 2240-95	27 ° Shore A
Specific Gravity:	BS 903 Part A1	1.08
Linear Shrinkage:		<1 %
Thermal Conductivity:		0.20 W/mK
Coefficient of Thermal Expansion:		
Volumetric		883 ppm / °C
Linear		294 ppm / °C
Min. Service Temperature:		-50 °C
Max. Service Temperature:	AFS 1540B	200 °C

Electrical Properties

Volume Resistivity:	ASTM D-257	2.85E+15 Ω.cm
Dielectric Strength:	ASTM D-149	18 kV/mm
Dielectric Constant at 1MHz:	ASTM D-150	2.6
Dissipation Factor at 1MHz:	ASTM D-150	2.5E-3

Adhesion Testing

Overlap Shear Strength:	ASTM D 1002	kg/cm²
Copper		
Aluminium		
Stainless Steel 304		
Polycarbonate		

Customers are advised to carry out their own tests on clean, degreased substrates to ensure satisfactory adhesion is achieved

All values are typical and should not be accepted as a specification.

Health and Safety – Material Safety Data Sheets available on request.

Packages – 75 ml and 310 ml cartridges, 20 kg and 200 kg bulk containers.

Storage and Shelf Life – Expected to be **12 months** in original, unopened containers below 40 °C.

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