

AS1800 (1082W) 1-Part Neutral Thixotropic Adhesive Sealant

Introduction

AS1800 is a non-corrosive, 1-part, room temperature vulcanising (RTV) silicone rubber. It is one of a new family of products called acetone cure sealants that are solvent free. It exhibits excellent primerless adhesion to many substrates. The product is cured rapidly in contact with atmospheric moisture to a tough rubber. AS1800 does not corrode copper or its alloys and exhibits excellent primerless adhesion when fully cured.

Key Features

- Non-corrosive
- Good spreading and tooling properties
- Fast skinning
- Good adhesion to most substrates

How to Use

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AS1800 is ready for use. If supplied in cartridges it can be applied using either manual or pneumatic dispensers. It can also be applied from bulk containers using conventional drum dispensing equipment.

Application and Cure

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. For optimum bond strength the thickness of the sealant joint is 1 to 2mm. Joints should be left undisturbed for at least 24 hours, but preferably longer to effect sufficient depth of cure. Full cure requires 7 days. Stress cracking can appear on some grades of polycarbonate. Customers are advised to carry out initial testing to ensure product compatibility.

Revision date: 25306.2104

Property	Test Method	Value
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Uncured Product

Colour:		White
Appearance:		Thixotropic paste
Tack Free Time:		2 minutes *
3mm Cure Through:		<24 hours *
Extrusion Rate:		169g / minute
* 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	2.20 MPa
Elongation at Break:	BS903 Part A2	388 %
Youngs Modulus:		0.50 MPa
Modulus at 100% Strain:	BS903 Part A2	0.80 MPa
Tear Strength:	BS903 Part A3	6.00 kN/m
Hardness:	ASTM D 2240-95	35° Shore A
Specific Gravity:	BS 903 Part A1	1.06
Linear Shrinkage:		<0.50 %
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	220 °C

Electrical Properties

Volume Resistivity:	ASTM D-257	5.3x10 ¹⁵ Ω.cm
Surface Resistivity:	ASTM D-257	3.3x10 ¹² Ω
Dielectric Strength:	ASTM D-149	>20 kV/mm
Dielectric Constant at 1MHz:	ASTM D-150	2.97
Dissipation Factor at 1MHz:	ASTM D-150	2.5x10 ⁻³

Adhesion Testing

Overlap Shear Strength:	ASTM D 1002	kg/cm ²
Copper		8.10
Aluminium		9.22
Stainless Steel 304		5.49

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. Arrangements can be made to supply in bulk containers.

Storage and Shelf Life – Expected to be 12 months in original, unopened containers.

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