Technical Data Sheet

AS1701 (1073B)
1-Part Adhesive Sealants

Introduction

AS1701 is a non-corrosive, 1-Part, room temperature vulcanising (RTV) silicone rubber.
It is one of a family of products called alkoxy cure sealants. It exhibits excellent primerless adhesive properties to many substrates.
The product is cured rapidly in contact with atmospheric moisture to a tough, moderately elastic rubber that exhibits excellent fire resistance.
It is recommended for electronic and electrical assemblies where flame resistance is a prerequisite.

Key Features

- Flame retardant
- Non-corrosive
- Excellent adhesion
- Excellent electrical resistance
- Low linear shrinkage
- Fast skinning
- Cure through 2mm in 24 hours
- Flame retardant to UL94V-1

Use and Cure Information

How to Use

AS1701 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 AS1701 is to be applied should be clean, dry and free from grease, dirt, and loose material.
Priming of surfaces is not normally required.
If AS1701 is being employed as an adhesive, it should be applied to one clean surface and the other clean surface brought into contact with it within 15 to 30 seconds.
The recommended thickness of the sealant joint is 1 to 3mm for optimum bond strength and fire resistance.
Joints should be left undisturbed for at least 24 hours, but preferably longer to effect sufficient depth of cure.
Note: Always work in a well-ventilated area and avoid contact of the sealant with skin and eyes.

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Property	Test Method	Value
Uncured Product		
Colour:		Black
Appearance:		Thixotropic Paste.
Viscosity:	Brookfield	mPa.s
Tack Free Time:		3 minutes *
3mm Cure Through:		24 hours *
Extrusion Rate:		260 g / 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	2.35 MPa
Elongation at Break:	BS903 Part A2	200 %
Youngs Modulus:		1.80 MPa
Modulus at 100% Strain:	BS903 Part A2	2.10 MPa
Tear Strength:	BS903 Part A3	19.10 kN/m
Hardness:	ASTM D 2240-95	52 ° Shore A
Specific Gravity:	BS 903 Part A1	1.28
Linear Shrinkage:		1.00 %
Thermal Conductivity:		0.60 W/mK
Coefficient of Thermal Expansion:		
Volumetric		690 ppm / °C
Linear		230 ppm / °C
Min. Service Temperature:		-50 °C
Max. Service Temperature:	AFS 1540B	220 °C

Electrical Properties

Volume Resistivity:	ASTM D-257	7.85×10^{15} Ω.cm
Surface Resistivity:	ASTM D-257	3.8×10^{16} Ω
Dielectric Strength:	ASTM D-149	>18 kV/mm
Dielectric Constant at 1MHz:	ASTM D-150	2.92
Dissipation Factor at 1MHz:	ASTM D-150	1.2×10^{-3}
Dielectric Breakdown Voltage:		33.33 kV

Adhesion Testing

Good unprimed adhesion to many substrates including glass, copper, stainless steel, aluminium and most plastics.
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 – 310 ml and 75ml cartridges. Arrangements can be made to supply in bulk containers.

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

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