Technical Data Sheet

AS1622(1350B)
1-Part Adhesive Sealants

Introduction

AS1622 is a specially formulated non-acid curing, one component, self-levelling room temperature vulcanising silicone rubber.
This product has been formulated for use in electrical and electronic assemblies, and in applications where primerless adhesion and non-corrosion are prerequisites.
AS1622 also exhibits excellent flow and self-levelling characteristics.
Typical applications include conformal coatings for electronic circuitry, primerless sealing of plastic and metal assemblies, flow-in gaskets.

Key Features

- Good adhesion to most substrates
- Good flow properties
- Fast curing

Use and Cure Information

How to Use

Curing of the sealants is triggered by contact with moist air and begins with the formation of a skin on the exposed surface and gradually penetrates the body of the sealant. In moderately humid conditions (>50% RH) and temperatures in the 20 to 25ºC range, a 3mm section of fully exposed sealant should cure through in approximately 24 hours.

Application and Cure

AS1622 can be applied by dipping, spraying or flow coating.
When applied as a conformal coating to a printed circuit board, the latter should be inserted slowly into the sealant in a nitrogen or inert gas blanketed dip tank. The coated board should be withdrawn slowly to avoid air entrapment and the excess sealant allowed to drain back into the tank. Best coverage is achieved by positioning the boards with protruding or pointed sections facing down during the curing cycle.
If it is deemed necessary to let the sealant down in a solvent for spray application, the preferred solvents are aromatic or aliphatic hydrocarbons. All solvents must be completely dry and the diluted sealants must be stored in suitable airtight containers when not in use.
Customers are advised to familiarise themselves with all precautions for the handling and storage of solvents and dispersions such as the exclusion of sources of ignition, ventilation, prevention of static build-up and health hazards.

Property	Test Method	Value
Uncured Product		
Colour:		Black
Appearance:		Viscous liquid
Viscosity:	Brookfield	25000 mPa.s
Tack Free Time:		14 minutes *
50g Spread Diameter:		135 mm *
3mm Cure Through:		<24 hours *
Extrusion Rate:		860 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	1.91 MPa
Elongation at Break:	BS903 Part A2	394 %
Youngs Modulus:		0.55 MPa
Modulus at 100% Strain:	BS903 Part A2	0.32 MPa
Tear Strength:	BS903 Part A3	3.1 kN/m
Hardness:	ASTM D 2240-95	24 ° Shore A
Specific Gravity:	BS 903 Part A1	1.04
Linear Shrinkage:		<1.00 %
Thermal Conductivity:		0.20 W/mK
Coefficient of Thermal Expansion:		
Volumetric		846 ppm / °C
Linear		282 ppm / °C
Min. Service Temperature:		-50 °C
Max. Service Temperature:	AFS 1540B	275 °C

Electrical Properties

Volume Resistivity:	ASTM D-257	$1.0x10^{15}$ Ω.cm
Surface Resistivity:	ASTM D-257	Ω
Dielectric Strength:	ASTM D-149	kV/mm
Dielectric Constant at 1MHz:	ASTM D-150	2.6
Dissipation Factor at 1MHz:	ASTM D-150	$1x10^{-2}$

Adhesion Testing

Good unprimed adhesion to many substrates including glass 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 cartridges and 20 litre bulk containers.

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

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