

PV5700 () Thixotropic adhesive sealant

Introduction

PV5700 is a specially formulated neutral cure silicone sealant designed for use where low modulus and compatibility with sensitive materials are required.

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 many common substrates used specifically in the photovoltaic and solar industries

Key Features

- Non corrosive
- Excellent adhesion to many substrates
- Suitable for polycarbonates and sensitive materials
- Non slumping

Use and Cure Information

Typical Applications

- PV & Solar applications
- Frame sealing
- Control box sealing
- Bonding control of boxes

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.

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

Health and Safety – Material Safety Data Sheets available on request

Property	Test Method	Value
Uncured Product		
Colour:		White
Appearance:		Thixotropic Paste
Tack Free Time:		15 minutes *
3mm Cure Through:		24 hours *
Extrusion Rate:		151 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 MPa
Elongation at Break:	BS903 Part A2	580 %
Youngs Modulus:		0.21 MPa
Hardness:	ASTM D 2240-95	34 ° Shore A
Specific Gravity:	BS 903 Part A1	1.50
Thermal Conductivity:		0.5 W/mK
Coefficient of Thermal Expansion:		
Volumetric		697 ppm / °C
Linear		232 ppm / °C
Min. Service Temperature:		-60 °C
Max. Service Temperature:	AFS 1540B	200 °C

Electrical Properties

Volume Resistivity:	ASTM D-257	6.66E+15 Ω.cm
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Adhesion

All substrates should be clean, dry and free of surface contamination. For plastic substrates, use a cleaning solvent such as Isopropanol to remove surface residues and allow drying before applying the sealant.

To achieve optimum adhesion to metallic substrates, abrade the surface with a fine grade steel wool or emery cloth number 4 and remove residues with a cleaning solvent such as Isopropanol or ACC Degreaser. Alternatively, Silcoset Primer can be used to enhance adhesive performance. Please contact your Regional Sales Manager for Silcoset Primer data sheet.

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.

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

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