

## SS-RTV174352 Technical Data Sheet 06/09/2016

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### 1 Part Neutral Flame Retardant Sealant

#### SS-RTV174352 Introduction

SS-RTV174352 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) sealant. The Alkoxy cure system produces a silicone sealant with excellent adhesion to most common substrates.

#### Key Features

- UL94VO Approved UL File No. E334038
- Fast skinning
- Excellent adhesion
- Non Corrosive

#### Typical Applications

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

#### SS-RTV174352 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 24hrs. The volatile by-products of the curing mechanism are relatively inoffensive alcohols.

Full bond strength and physical properties will be achieved in seven 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 1mm is achieved between parts to obtain best adhesion to substrates.

#### SS-RTV174352 Health and safety

Material Safety Data Sheets are available on request.

#### SS-RTV174352 Packages

75ml and 310ml cartridges and 220 kg bulk containers.

Arrangements can be made to supply in alternative packaging, please contact Silicone Solutions Ltd.

#### SS-RTV174352 Storage and Shelf Life

Expected to be 12 months in original unopened containers below 40°C

#### Property

##### Uncured Product

Colour:	Black
Appearance:	Black Paste
Tack Free Time:	3 Minutes*
3mm Cure Through:	24 hours*
Extrusion Rate:	260g / 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		1.8MPa
Modulus at 100% Strain		2.1 MPa
Tear Strength	BS903 Part A3	19.1kN/m
Hardness	ASTM D 2240-95	52° Shore A
Specific Gravity:	BS 903 Part A1	1.28
Linear Shrinkage:		1 %
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		220°C

#### SS-RTV174352 Electrical Properties

Volume Resistivity	ASTM D-257	7.85E+15 Ω.CM
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 E-3

#### SS-RTV174352 Adhesion Testing

Overlap Shear Strength	ASTM D 1002	Kg/cm <sup>2</sup>
Copper		8.67
Aluminium		7.66
Stainless Steel 304		6.04
Polycarbonate		5.93

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

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

#### Limited Warranty

Silicone Solutions Ltd warrants that its product will conform to Silicone Solutions Ltd internal specifications at the time of application or use, provided that the product is stored in accordance with Silicone Solutions Ltd recommendations and used or applied before the earliest of (1) the "use before date" indicated on the product package, (2) six months from the date of shipment, or (3) expiration of such other period or recommended storage time stated in the Silicone Solutions Ltd literature for the product. If notified in writing of a claim within six months of the products use of application, Silicone Solutions Ltd will at its option replace or refund the purchase price of any Silicone Solutions product with does not satisfy the foregoing warranty.

#### Limitation of Liability

Silicone Solutions Ltd shall in no event whether the claim is based on warranty, contract tort, strict liability, negligence or otherwise be liable for incidental or consequential damages, or for any other damages in excess of the amount of the purchase price. Note: For many products, Silicone Solutions Ltd may be able to offer a more extensive application specific warranty. For further information, contact Silicone Solutions Ltd Sales.