

## AS1603 (1040N) 1 Part low corrosive thixotropic adhesive sealant

### Introduction

AS1603 is a fast cure 1-part RTV silicone sealant specially formulated for applications requiring a combination of good adhesion, excellent physical and non-corrosive properties. The Oxime based cure system produces excellent physical properties and good adhesion particularly to plastics and many other substrates. Although not totally neutral the cured sealant is very low corrosive in nature.

### Key Features

- Thixotropic Paste
- Low corrosion
- Primerless adhesion to most plastics
- Low odour

### Use and Cure Information

#### How to Use

**AS1603** 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 **AS1603** is to be applied should be clean, dry and free from grease, dirt, and loose material.

Priming of surfaces is not normally required.

If it 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 30 to 60 seconds.

The recommended thickness of the sealant joint is 1 to 3mm for optimum bond strength.

Joints should be left undisturbed for at least 24 hours, but preferably longer to effect sufficient depth of cure. Full cure requires 7 days.

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**NOTE "For pneumatic dispensing of 310 ml cartridges, the recommended pressure is 2.25 to 3.45 bar (40 to 50 psi). Dispensing pressure above the recommended limits may lead to gas bypassing the piston, causing spluttering at the nozzle and poor bead quality"**

Property	Test Method	Value
<b>Uncured Product</b>		
Colour:		Translucent
Appearance:		Translucent
<b>Paste</b>		
Tack Free Time:		5 minutes *
3mm Cure Through:		12 hours *
Extrusion Rate:		390 g / minute
<b>Viscosity</b>		mPas
* 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	2.15 MPa
Elongation at Break:	BS903 Part A2	300 %
Youngs Modulus:		0.60 MPa
Modulus at 100% Strain:	BS903 Part A2	0.80 MPa
Tear Strength:	BS903 Part A3	4.80 kN/m
Hardness:	ASTM D 2240-95	23° Shore A
Specific Gravity:	BS 903 Part A1	1.07
Linear Shrinkage:		<0.80%
Thermal Conductivity:		0.20 W/mK
Coefficient of Thermal Expansion:		
Volumetric		888 ppm / °C
Linear		295 ppm / °C
Min. Service Temperature:		-50 °C
Max. Service Temperature:	AFS 1540B	220 °C

#### Electrical Properties

Volume Resistivity:	ASTM D-257	8.7E+15 Ω.cm
Dielectric Constant at 1MHz:	ASTM D-150	3.0
Dissipation Factor at 1MHz:	ASTM D-150	2.5E-3

#### Adhesion Testing

Overlap Shear Strength:	ASTM D 1002	kg/cm <sup>2</sup>
Copper		
Aluminium		3.18
Stainless Steel 304		3.52
Polycarbonate		6.30

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. Arrangements can be made to supply in bulk containers.

**Storage and Shelf Life** – Expected to be 18 months in original, unopened containers below 40°C.

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