

AS1603

Characterization

AS1603 is a 1 component, RTV silicone adhesive sealant. It is one in a range of oxime cure products which are solvent-free. It exhibits good primerless adhesion to many substrates, especially plastics, and cures rapidly at room temperature when in contact with atmospheric moisture. This product can be described as low corrosive but would not to be recommended for use with copper and its associated alloys.

Technical Data

	AS1603		
	Mixture		
Cure Type	Oxime		
FDA	No		CFR (21) 177.2600
Max Cure at 25°C	12	H	
Rheology	Paste		
Extrusion Rate	390	g/min	
Self Bonding	Yes		
Tack Free Time	5	mins	
Colour	Translucent		
Cured product	Vulcanisate after 7 days at 23°C +/- 2°C and 50% +/-5% humidity		
CTE Linear	295	ppm/°C	
CTE Volumetric	888	ppm/°C	
Duro Shore A	33		ASTM D 2240-95
Working Temp.	-50 - 220	°C	AFS_1540B
Tensile	2.15	MPa	ISO 37
Elongation	300	%	ISO 37
Modulus Youngs	0.6	MPa	
Modulus at 100% Strain	0.8	MPa	
Tear	4.8	kN/m	BS ISO 34-1
Linear Shrinkage	0.8	%	
SG	1.07		BS ISO 2781
Thermal Conductivity	0.2	W/m*K	
UL 94V-0	No	ppm	

	Electrical properties		
Dielectric Constant	3	1kHz	ASTM D-150
Dielectric Strength	18	kV/mm	ASTM D-149
Dissipation Factor	0.0025	1kHz	ASTM D-150
Surface Resistivity	1.36E+15	ohms	ASTM D-257
Volume Resistivity	8.7E+15	ohms*cm	ASTM D-257

The above given values are product describing data. Please consult the 'delivery specification' for binding product specifications. Further data about product properties, toxicological, ecological data as well as data relevant to safety can be found in the safety data sheet.

Storability / Storage

With a proper storage approx. 12 months if stored properly max. at 40°C and protected from frost in a dry place in closed original containers.

Properties

- Thixotropic paste
- Low corrosive
- Primerless adhesion to most plastics
- Low odour

Application Technique

Processing

AS1603 is a ready for use 1 component system. If supplied in cartridges, it can be applied using either manual or pneumatic dosing guns. It can also be applied from bulk containers using conventional drum dosing equipment.

All surfaces to which the sealant is to be applied should be clean, dry and free from grease, dirt, and loose material. Priming of surfaces is not normally required. If using the product as an adhesive, it should be applied to one clean surface and the other clean surface brought into contact with it within the tack-free time stated above. For optimum bond strength, the thickness of the sealant joint should be at least 1 mm.

The sealant will cure upon exposure to atmospheric moisture, ideally between 20 – 30 °C and 40 – 70 % Relative Humidity. Time taken for cure will depend on the thickness of the joint, humidity and temperature. Joints should be left undisturbed for at least 24 hours, but preferably longer to effect sufficient depth of cure. Full cure requires 7 days.

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

It is absolutely important to check the compatibility in preliminary tests if unknown substrates are used.

Safety

Please observe our EC safety data sheets and the safety remarks on our container labels when handling our products. The dangerous goods regulations and the accident prevention regulations of the professional associations must be particularly observed. Keep the EC safety data sheet of the applied product at hand since it provides you with useful instructions for the safe use and disposal of the product as well as for actions to be taken in case of accidents.

We reserve the right to modify the product and technical leaflet.

Our department for applied technique is always at your service for further information and advice.

Our technical advice and recommendations given verbally, in writing or by trials are believed to be correct. They are neither binding with regard to possible rights of third parties nor do they exempt you from your task of examining the suitability of our products for the intended use. We cannot accept any responsibility for application and processing methods which are beyond our control.

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CHT Germany GmbH

Postfach 12 80, 72002 Tübingen, Bismarckstraße 102, 72072 Tübingen, Germany

Telephone: 07071/154-0, Fax: 07071/154-290, Email: info@cht.com, Homepage: www.cht.com