

AS1740

Characterization

AS1740 is a 1 component, self-levelling, high performance RTV silicone adhesive. It is a neutral cure silicone sealant specifically designed to meet the physical, chemical and temperature-resistant requirements of MIL-A-46146B. It features exceptional physical properties and is compatible with many sensitive substrates including copper, brass, steel, aluminium and FR4, making this an ideal option for many electronic applications where a high performance is paramount. The alkoxy cure system produces a silicone sealant with excellent adhesion to most common substrates.

Technical Data

	AS1740		
Viscosity	40,000	mPa·s	Brookfield HBTD
	Mixture		
Cure Type	Alkoxy		
FDA	No		CFR (21) 177.2600
Max Cure at 25°C	72	[h]	
Rheology	Flowable		
Self Bonding	Yes		
Tack Free Time	18	[mins.]	
Colour	Translucent		
Cured product	Vulcanisate after 7 days at 23°C +/- 2°C and 50% +/-5% humidity		
CTE Linear	294	[ppm/°C]	
CTE Volumetric	883	[ppm/°C]	
Duro Shore A	27		ASTM D 2240-95
Working Temp.	-62 - 200	[°C]	AFS_1540B
Tensile	2.5	[MPa]	ISO 37
Elongation	400	[%]	ISO 37
SG	1.03		BS ISO 2781
Thermal Conductivity	0.18	[W/m*K]	
UL 94V-0	No	[ppm]	
	Electrical properties		
Dielectric Constant	2.6	[1kHz]	ASTM D-150
Dielectric Strength	18	[kV/mm]	ASTM D-149
Dissipation Factor	0.0031	[1kHz]	ASTM D-150
Volume Resistivity	2.25E+15	[ohms*cm]	ASTM D-257

Storability / Storage

With a proper storage the storability is approx. 6 months. This product needs to be stored at 40 °C at the most and protected from frost in a dry place in closed original containers.

Properties

- Meets the requirements of MIL-A-46146B
 - UL certified under file No. E334038
 - Excellent adhesion to most substrates
 - Contains UV trace for easy detection
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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.

Application Technique

Processing

This product 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 normally not required. If the product is used 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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