AS1421

Characterization

AS1421 is a heat cured, non-corrosive, neutral cure, 1-part, silicone adhesive sealant. It is one in a range of addition cure products which are solvent free.
It exhibits primless adhesion to many substrates when cured at temperatures above 100°C. It cures to form a very tough resilient silicone elastomer. This product will not corrode copper or its alloys and is suitable for use with electronic components.

Technical Data

	AS1421		
Viscosity	140,000	mPas	Brookfield
	Catalysed Mass		
Cure Type	Addition		
Rheology	Grey Paste		
Self-Bonding	Yes		
Colour	Grey		
FDA	No		CFR [21] 177.2600
Max Cure Mins @ 100°C	16	Min	
	Vulcanisate after 1 hour at 125°C		
CTE Linear	195	ppm/°C	
CTE Volumetric	586	ppm/°C	
Duro Shore A	56		ASTM D 2240-95
Working Temp.	-50 - 210	°C	AFS_1540B
Tensile	2.2	MPa	ISO 37
Elongation	105	%	ISO 37
Modulus Youngs	0.752	MPa	
SG	2.18		BS ISO 2781
Thermal Conductivity	2.1	W/m*K	
UL 94V-0	Yes		
	Electrical properties		
Dielectric Strength	>18	kV/mm	ASTM D-149
Volume Resistivity	3.5E+13	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

If stored properly below -5 - <10 °C, protected from frost and dry in closed original containers the product can be used for approx.. 12 months.

Key Features

- UL 94V-0 approved file Number E334038
- Adhesion and 3mm cure through at 125°C after only 10 mins
- Thermally conductive
- Shelf life => 12 months at < 5°C

Application Technique

Processing

AS1421 is a ready to use 1-Part system. It is recommended that liquid versions be thoroughly mixed prior to use, particularly thermally conductive products which are supplied in tubs or pails. Ensure that all surfaces of the substrate are clean and degreased. The work area should be free of contaminants such as organic compounds of sulphur, phosphorus, nitrogen and tin, which act as catalyst poisons.

The rate of cure will depend on how long it takes for the sealant to reach the required curing temperature. Small beads of 1 to 2 mm diameter, used as formed-in-place gaskets, can be cured quickly with hot air guns e.g. paint stripper types. With larger sections of sealant or when using as an encapsulant, cure time will increase and the use of an oven will be needed. Increasing the temperature will reduce cure times and maximum cure temperature should not exceed 200°C. All times are based on the actual time in an air-circulating oven at the stated temperature.

Note:
Improved adhesion is achieved by post cure at 120 to 150°C for 1 to 2 hours.

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.

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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