

AS1701

Characterization

This is a non-corrosive, neutral cure, 1-part, RTV silicone adhesive sealant. It is one in a range of alkoxy cure products which are solvent-free. It exhibits excellent primerless adhesion to many substrates and cures at room temperature when in contact with atmospheric moisture to form a tough rubber. This product will not corrode copper or its alloys and is suitable for use with electronic components

Technical Data

| | AS1701 | | | |
|-------------------------------------|---|--------|---|--|
| | Catalysed Mass | | | |
| Cure Type | Alkoxy | | CFR (21) 177.2600 | |
| FDA | Nein | | | |
| Max Cure at 25°C | 24 | h | | |
| Rheology | Paste | | | |
| Self Bonding | Yes | | | |
| Tack Free Time | 3 | min | | |
| Colour | Black | | | |
| | Vulcanisate after 7 days cure at 23°C +/- 2°C and 50% +/-5% humidity | | | |
| CTE Linear | 230 | ppm/°C | ASTM D 2240-95 AFS_1540B ISO 37 ISO 37 BS ISO 34-1 BS ISO 2781 | |
| CTE Volumetric | 690 | ppm/°C | | |
| Duro Shore A | 52 | | | |
| Working Temp. | -50 - 220 | °C | | |
| Tensile | 2.35 | MPa | | |
| Elongation | 200 | % | | |
| Modulus Youngs | 1.8 | MPa | | |
| Modulus at 100°C | 2.1 | MPa | | |
| Tear | 19.1 | kN/m | | |
| Linear Shrinkage | 1 | % | | |
| SG | 1.28 | | | |
| Thermal Conductivity | 0.6 | W/m*K | | |
| | Electrical properties | | | |
| Dielectric Breakdown Voltage | 33.33 | kV | | ASTM D-150 ASTM D-149 ASTM D-150 ASTM D-257 |
| Dielectric Constant | 2.92 | 1kHz | | |
| Dielectric Strenght | >18 | kV/mm | | |
| Dissipation Factor | 0.0012 | 1kHz | | |
| Surface Resistivity | 3.8E+16 | Ohm | | |
| Volume Resistivity | 7.85E+15 | Ohm*cm | | |

| | Adhesion testing | | |
|--------------------------------------|-------------------------|--------------------|------------|
| Lap Shear Aluminium | 10.78 | kg/cm ² | ASTM D1002 |
| Lap Shear Copper | 10.06 | kg/cm ² | ASTM D1002 |
| Lap shear Polycarbonate Steel | 5.93 | kg/cm ² | ASTM D1002 |
| Lap Shear Stainless Steel | 2.6 | kg/cm ² | ASTM D1002 |

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 at 40 °C at the most and protected from frost in a dry place in closed original containers, the product will hold for approx. 12 months.

Key Features

- Non-corrosive
- Excellent adhesion to most substrates
- Fast skinning

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 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 dispensing 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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