

AS1821

Characterization

AS1821 is a non-corrosive, neutral cure, 1-part, RTV silicone adhesive sealant. It is one in a range of Acetone 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

Key Features:

- Fast room temp cure
- Non-corrosive
- Low linear shrinkage
- Solvent free

Technical Data

| | AS1821 | | |
|-----------------------|---|--------|-------------------|
| Viscosity | 20,000 | mPa.s | |
| | Mixture | | |
| Cure Type | Acetone | | |
| FDA | No | | CFR (21] 177.2600 |
| Max Cure @ 25°C | 24 | h | |
| Spread Diameter (50g) | 120 | Mm | |
| Rheology | Flowable | | |
| Self Bonding | Yes | | |
| Tack Free Time | 10 | mins. | |
| Colour | Black | | |
| Cured product | After 7 days cure at 23°C +/- 2°C and 50% +/-5% humidity | | |
| CTE Linear | 302 | ppm/°C | |
| CTE Volumetric | 906 | ppm/°C | |
| Duro Shore A | 27 | | ASTM D 2240-95 |
| Working Temp. | -50 – 220 | °C | AFS_1540B |
| Tensile | 0.85 | MPa | ISO 37 |
| Elongation | 200 | % | ISO 37 |
| Tear | 3 | kN/m | BS ISO 34-1 |
| Modulus Youngs | 0.4 | MPa | |
| Modulus @ 100% Strain | 0.5 | MPa | |
| SG | 1.07 | | BS ISO 2781 |
| Thermal Conductivity | 0.2 | W/m*K | |
| UL 94V-0 | No | | |

| | Electrical properties | | |
|--|-------------------------|--------------------|------------|
| Dielectric Constant | 2.88 | 1kHz | ASTM D-150 |
| Dielectric Strength | >20 | kV/mm | ASTM D-149 |
| Dissipation Factor | 0.005 | 1kHz | ASTM D-150 |
| Surface Resistivity | 1.80E+11 | ohms | ASTM D-257 |
| Volume Resistivity | 5.4E+15 | ohms*cm | ASTM D-257 |
| | Adhesion testing | | |
| Lap Shear Aluminium | 5.9 | kg/cm ² | ASTM D1002 |
| Lap Shear Copper | 6.5 | kg/cm ² | ASTM D1002 |
| Lap Shear 304 kg/cm² Stainless Steel | 3.5 | kg/cm ² | ASTM D1002 |

Storability / Storage

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

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

AS1821 product is a ready for use 1 part system. If supplied in cartridges it can be applied using either manual or pneumatic dispensing guns. It can also be applied from bulk containers using conventional drum dispensing equipment.

All surface 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 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 opposite. For optimum bond strength, the thickness of the sealant joint should be a minimum of 1 mm.

The sealant will cure upon exposure to atmospheric moisture, ideally between 20 to 30°C and 40% to 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). 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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