

AS1707 1 Part Non-Corrosive Neutral Cure Adhesive Sealant (Electronic Grade)

Description

This is a non-corrosive, neutral cure, 1-part, RTV (Room Temperature Vulcanising) 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.

Key Features

- Thermally conductive
- Non corrosive for sensitive substrates
- Low thermal outgassing (ECSS-Q-ST-70-02C)
- UL94 V0 recognised in file No. E334038

Application

Electronic assemblies, aerospace and automotive

Use and Cure Information

This product is a ready for use 1 Part system. If supplied in cartridges it can be applied using pneumatic dispensing guns. It can also be applied from bulk containers using conventional drum dispensing 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 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.

Supplied in 165ml (6oz) cartridges which can be dispensed automatically.

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

Health & Safety

Safety Data Sheets available on request.

Adhesion

Customers are advised to carry out their own tests on clean, degreased substrates to ensure satisfactory adhesion is achieved. All values are typical and should not be accepted as a specification.

Packages

165ml (6oz) Semco cartridges, arrangements can be made to supply in other containers. Please discuss with your Regional Sales Manager.

Storage and Shelf Life

Expected to be 12 months at <5°C in original, unopened containers

Revision Date 17 Jul 2023
Revision No 7
Download Date 30 Apr 2024

Property

Uncured Product

| | |
|--|-------------------------------|
| Cure Profile | 23+/-2°C and 50+/-5% humidity |
| Cure Through to 3 mm Depth | 48 hr |
| Cure Type | Alkoxy |
| Rheology | Paste |
| Self Bonding | Yes |
| Tack Free Time / Skin Formation at 23°C/73°F | 10 min |

Cured Product

| | |
|-------------------------------------|-----------------------------|
| CVCM | 0.03 % |
| Color | Grey |
| Density | BS ISO 2781 2.95 g/cm3 |
| Elongation at Break | ISO 37 11 % |
| Hardness Shore A | ASTM D 2240-95 84 |
| Max Working Temp | 230 °C / 446 °F |
| Min Working Temp | -65 °C / -85 °F |
| TML | 0.09 % |
| Tensile Strength | ISO 37 1.82 N/mm2 / 264 psi |
| Thermal Conductivity | 3.27 W/mK |
| Thermal Outgassing ECSS-Q-ST-70-02C | Yes |
| UL 94V-0 | Yes |
| UL File No. | E334038 |
| UL Listed | Yes |

Electrical Properties

| | |
|------------------------------|-----------------------------|
| Volume Resistivity (Ohms cm) | ASTM D-257 1.26E+14 ohms cm |
|------------------------------|-----------------------------|

Storage

| | |
|-------------------------|----------------|
| Max Storage Temperature | 40 °C / 104 °F |
| Shelf Life | 12 mths |