

## Silcoset® 152

### Characterization

This is a 1 component, RTV (Room Temperature Vulcanising) silicone adhesive sealant. It is one in a range of acetoxy cure products which are solvent-free. During cure, it liberates a very small amount of acetic acid, giving rise to the familiar 'vinegar' odour which quickly dissipates after cure. It exhibits good primerless adhesion to many substrates and cures rapidly at room temperature when in contact with atmospheric moisture. This product is not to be recommended for use with copper and its associated alloys or in electronic assemblies.

### TECHNICAL DATA

|                        | <b>Silcoset® 152</b>   |        |  |
|------------------------|--|--------|--|
| Appearance             | White paste  |        |  |
|                        | <b>Catalysed Mass</b>  |        |  |
| Cure Type              | Acetoxy  |        | CFR (21] 177.2600  |
| FDA                    | No   |        |  |
| Extrusion Rate         | 225  | g/min  |  |
| Max Cure at 25°C       | 7  | h      |  |
| Rheology               | Paste  |        |  |
| Self Bonding           | Yes  |        |  |
| Tack Free Time         | 2  | min    |  |
| Colour                 | White  |        |  |
|                        | <b>Vulcanisate after 7 days cure at 23°C +/- 2 °C and 60% +/-5% humidity</b> |        |  |
| CTE linear             | 292  | ppm/°C | ASTM D 2240-95<br>BS ISO 48<br>AFS-1540B<br>ISO 37<br>ISO 37<br>BS ISO 34-1<br>BS ISO 2781 |
| CTE Volumetric         | 876  | ppm/°C |  |
| Duro Shore A           | 40   |        |  |
| Hardness IRHD          | 40   |        |  |
| Compression Set        | 40   | %      |  |
| Working Temp.          | -60 to 300   | °C     |  |
| Tensile strength       | 2.31   | MPa    |  |
| Elongation             | 240  | %      |  |
| Modulus Youngs         | 0.75   | MPa    |  |
| Modulus at 100% Strain | 1  | MPa    |  |
| Tear                   | 6.1  | kN/m   |  |
| Linear Shrinking       | 1  | %      |  |
| SG                     | 1.08   |        |  |
| Thermal Conductivity   | 0.2  | W/m*K  |  |
| UL 94V-0               | No   |        |  |

® = registered trademark

|                             |                                     |                    |            |
|-----------------------------|-------------------------------------|--------------------|------------|
|                             | <b><u>Electrical properties</u></b> |                    |            |
| Dielectric Constant at 1kHz | 3.6                                 |                    | ASTM D-150 |
| Power Factor at 1kHz        | 0.008                               |                    |            |
| Surface Resistivity         | 3.46E+14                            | ohm                | ASTM D-257 |
| Volume Resistivity          | 3.21E+15                            | Ohm*cm             | ASTM D-257 |
|                             | <b><u>Adhesion testing</u></b>      |                    |            |
| Lap Shear Aluminium         | 10.6                                | kg/cm <sup>2</sup> | 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

With a proper storage approx. 24 months if stored properly max. at 40 °C and protected from frost in a dry place in closed original containers.

### Properties

- Flexible from - 60 to +300°C
- Aerospace approved
- Good electrical insulation
- Excellent adhesion to most substrates

## Application Technique

### Mixing

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 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. 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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