

Silcoat 7021

Moisture Cure Silicone Conformal Coating

| Typical Properties | | | |
|------------------------------------|-------------|--------------------|-------------|
| Property | Unit | Value | Test Method |
| Color / Component | | Blue / Transparent | Visual |
| Density | Gram /cc | 1.0 | ASTM D792 |
| Viscosity (25°C) | cps | 600 | ASTM D2196 |
| Skin Over Time (25°C 55%R.H.) | Min | 15 | UATM |
| Cure Time (5 mils, 25°C, 50% RH) | Min | 25 | UATM |
| Solvent Content | Weight % | 0 | UATM |
| Weight loss in cure | Weight % | 10% | TGA |
| Property as Cured | | | |
| Color | | Blue / Transparent | Visual |
| Hardness | Shore A | 32 | ASTM D2240 |
| Tensile Strength | Psi | 110 | ASTM D638 |
| Elongation | % | 80 | ASTM D638 |
| Peel Adhesion (over Al plate @25C) | lb / inch | > 3 | UATM |
| Dielectric Constant | @100 Hz | 3.2 | ASTM D150 |
| Dissipation Factor | @100 Hz | < 0.01 | ASTM D150 |
| Dielectric Strength | Volt/mil AC | > 450 | ASTM D149 |
| Volume Resistivity | Ohm-cm | > 10E+14 | ASTM D257 |
| Tg | °C | -120 | TGA |
| Useful Temperature Range | °C | -55 to 200 | TGA |

These figures are only intended as a guide and should not be used in preparing specifications.
UATM – United Adhesives’ Test Method

Processing Instruction

Important! To reach best results, the coating surface needs to be clean and free of oil, grease, lubricants, soaps, dust, mold release agents, etc. Cure time will vary depending on exposure conditions, For instance, a 5 mil thick coating cured under 50% R.H. at 25°C will need ~25 minutes to cure through.

We recommend running preliminary tests to optimize conditions for the particular application. The cure of 7021 may be accelerated with a higher humidity and temperature. Recommendations for automated dispensing equipment and accelerated cure profiles can be obtained by contacting directly to United Adhesives, Inc.

Storage

Silcoat 7021 has a shelf life of at least 12 months when stored at ambient (< 25°C) in the originally sealed container. Storage beyond the date specified does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.

Safety information

Silcoat 7021 silicone releases low content of oxmine volatile by-product in cure process when it is exposed to moisture. Please use adequate ventilation in its cure stage. General hygiene regulations should be observed. Comprehensive instructions are given in the corresponding Material Safety Data Sheets that are available on request from United Adhesives, Inc.

Characteristics

Silcoat 7021 is room temperature moisture curable conformal coating. It is one-component, solvent-free coating compound. After cure, it forms a rubbery layer with excellent adhesion to most substrates, which provides protection for electronic devices. Silcoat 7021 is best applied by spraying or dipping. A coating thickness of 5 to 10 mils is recommended for best results.

Special Features and Benefits

- One part ready to use
- Solvent free (100% solid)
- Room temperature moisture cure
- Bond to various substrates
- Strong media resistance
- Flexible over -40°C to 180°C
- Excellent dielectric property
- Low thermal stress

Typical Applications

- Protection of electronic components / devices
- For harsh environment applications
- Water resistant coating
- Automotive electronics
- Semiconductor and telecommunications
- Low thermal stress coating

For heat-cure silicone conformal coating, please select United Adhesives’ products SC8022 or SC8026.

The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies’ raw materials are also being used. The recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties’ rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the products for a particular purpose. For technical, quality, or product safety questions, please contact directly to United Adhesives Inc.