



TECHNICAL DATA SHEET

RS 831-141 Modified Silicone Conformal Coating - Red

RS 831-141 is a flexible, red opaque conformal coating, specifically designed for the protection of electronic circuitry. It has been formulated to meet the highest defence standards in both Europe and the United States.

- Red opaque coating provides camouflage of PCB design
- Heat-cured coating is resistant to many solvents used within aerospace and automotive industries
- Very wide operating temperature range
- Can be reworked using specialist removal product

Approvals	RoHS-2 Compliant (2011/65/EU):	Yes
Liquid Properties	Appearance: Density @ 20°C (g/ml): Flash Point: Solids content: Touch Dry: Recommended Curing Schedule*:	Red Opaque 0.78 <23°C 39% 50 - 55 minutes 2 Hours @ 20°C followed by: 2 - 24 Hours @ 90°C
Cured Film Coating	Colour: Operating Temperature Range: Flammability: Dielectric Strength: Dielectric Constant: Surface Insulation Resistance: Dissipation Factor (@ 1MHz, 25°C): Moisture Resistance (MIL-1-46058C):	Red Opaque -70°C to +200°C Meets UL94 V-1 90 kV/mm 4.75 @ 1MHz $1 \times 10^{13} \Omega$ 0.044 Meets approval

Packaging
200ml Aerosol

Order Code
RS 831-141

Directions for Use

The can must be shaken before use (typically 2-3 minutes). The can should be held at 45° and 200mm from the substrate to be coated. The valve should then be depressed when the can is pointing slightly off target and moved at about 100mm/s across the target. To ensure the best coating results are achieved try to use a smooth sweeping motion with small overlap for successive rows.

To ensure penetration of the coating beneath the components and in confined spaces, spray the assembly from all directions to give an even coating. After spraying, the boards should be placed in an air-circulating drying cabinet following the curing schedule.



Drying Times and Curing Conditions

The properties gained from RS 831-141 are dependent on the curing schedule employed. It is essential that the coating be allowed a minimum of two hours drying time at ambient temperature prior to any heat curing. This is necessary to allow the solvent system to evaporate.

Ambient Ambient curing is via solvent evaporation only. Eliminating the heat curing step will reduce solvent resistance. Coated boards should be left at room temperature for the solvent to evaporate; extraction is required in the curing area.

Commercial Most commercial users will gain satisfactory performance from this coating by curing for two hours at 90°C after the two-hour ambient cure. This will give limited resistance to solvents.

Military For maximum solvent resistance cure at 2 hours at ambient following by 24 hours @ 120°C.

It is recommended that the coating be thoroughly cured on circuits, which have design areas of very high impedance that require adjustment after application.