

CRC URETHANE COATS

1. GENERAL DESCRIPTION

Clear or red one-component urethane type conformal coatings.

CRC Urethane Coats provides an air curing conformal urethane type coating that insulates electrical/electronic equipment, seals out water and moisture and acts as a barrier for contaminants. CRC Urethane Coats dry fast and adhere well. After curing they form a highly flexible film which is durable and resistant to abrasion and contaminants.

2. FEATURES

- Available in clear or red formulations:
 - Clear: contains U.V.- fluorescent dye for easier quality control
 - Red: provides additional corrosion resistance
- Dries quickly to a durable, flexible and non-conductive film.
- Excellent electrical characteristics:
 - High dielectric strength
 - High surface and volume resistivity
- Effective temperature range of - 40°C to + 120°C.
- Abrasion-resistant insulator for electrical/electronic equipment and components.
- Specifications: * NSN 5970-01-017-5738.

3. APPLICATIONS

Urethane Clear - protective coating for:

- Printed circuit boards

Urethane Red or Clear - coating for:

- Electric motor windings
- Armature coils
- Boxes
- Controls
- Commutator ends
- Terminals
- Housing
- Transformer connectors
- Bus bars
- Solenoids
- Tools.

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4. DIRECTIONS

- Clean and decrease surface thoroughly before application (use one of the CRC precision cleaners or Lectra Clean as appropriate).
- Shake aerosol can well; red formulation contains an agitator ball for pigment dispersion. Stir or mix bulk products to homogenize. Repeat while using. Petroleum solvents (white spirit) may be used to dilute the bulk product to the required viscosity and film thickness.
- Apply light, even coats. Best results are obtained with 2 (or even more) lighter rather than 1 heavy coat. Additional coats can be applied when first coat is solvent dry (approx. 120 min). For maximum adhesion, 2nd coat must be applied within 48 hours.
- Due to slow cross-linking reaction, room temperature curing can take several days. Accelerated curing can be accomplished by baking at 60°C for 24 hours. Under those conditions cure for handling is reached in 2 to 3 hours.
- For dipping applications, it is advised to cover the bath when not in use and to prevent skin formation by keeping air out (e.g. by nitrogen blanketing). Rags or filters heavily contaminated with these products should be protected from autoignition by soaking with water or cleaning (e.g. with CRC Lectra Clean).
- When finished spraying, clear valve by turning can upside down and pressing button until only propellant escapes. If clogging occurs, remove button and clean orifices with fine wire.
- If necessary, remove with CRC Lectra Clean (if curing has only started) or CRC Gasket Remover (for fully cured films).
- Do not use on energized equipment. Use in well-ventilated area.
- A safety data sheet (MSDS) according to EU directive 93/112 is available for all CRC products.

5. TYPICAL PRODUCT DATA (without propellant)

	Clear	Red
Appearance:	Clear, light yellow	Red brown
Specific gravity (bulk @ 20°C)	0,85 – 0,89	0.90 – 0,94
Flash point		
aerosol:	< 0°C	< 0 °C
bulk:	> 30°C	> 32°C
Viscosity (bulk @ 20°C) :	30 to 150 mPa.s	50 to 150 mPa.s
Coverage (20 µm dry film, theoretical calculation)		
aerosol:	0.5 to 1 m ² /100ml	0.5 to 1 m ² /100ml
bulk:	15 m ² /l	18 m ² /l

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	Clear	Red
Drying time (dry-to-touch) :	approx. 120 min	approx 120 min

Cured film properties (thickness 20 - 40 µm, 24 hrs at ambient temperature + 24 hrs drying at 60°C)

Adhesion	Gt 0 – 1	Gt 0 - 1
Dielectric strength:	> 40 kV/mm	> 40 kV/mm
Volume resistivity:	> 10 ¹² .Ωcm	> 10 ¹² . Ωcm
Surface resistivity :	> 10 ¹² Ω	> 10 ¹² Ω

Adhesion on copper plates, measured at ambient temperature

following 6 hrs at -40°C	Gt 0 – 1	Gt 0 -1
following 6 hrs at +120°C	Gt 0 – 1	Gt 0 -1

Salt spray resistance (ASTM B117 – indicative values for film thickness > 60 µm):
24 to 48 hrs. 72 to 96 hrs.

6. PACKAGING

Clear:	aerosol : 12 x 250 ml	bulk : 2 x 4 l - 20 l
Red :	aerosol : 12 x 250 ml	bulk : 2 x 4 l

*All "electrical" properties are being reviewed according current IEC test methods.

All statements in this publication are based on service experience and/or laboratory testing. Because of the wide variety of equipment and conditions and the unpredictable human factors involved, we recommend that our products be tested on-the-job prior to use. All information is given in good faith but without warranty neither expressed nor implied.

This Technical Data Sheet may already have been revised at this moment for reason such as legislation, availability of components and newly acquired experiences. The latest and only valid version of this Technical Data Sheet will be sent to you upon simple request or can be found on our website: www.crcind.com.

We recommend you to register on this website for this product so you will be able to receive any future updated version automatically.

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