

UVC 88F Biocompatible Coating Product Datasheet

Excellent Reworkability

Excellent Flexibility

Excellent Brilliance Fluorescence

Description

UVC 88F is a highly fluorescing, one part 100% solid dual cure acrylated polyurethane flexible conformal coating which has excellent chemical resistance, flexibility and moisture resistance. UVC 88F has excellent adhesion to standard solder mask, metallization, components and substrate materials; and is fully compatible with no-clean flux residue. After cure, UVC 88F can provide excellent protection to all surfaces against moisture, dust, chemicals and other harsh environments. The cure of the shadow area can be accomplished using secondary heat cure. All data of thermal cycle and surface insulation resistance have indicated UVC 88F meets MIL-I-46058C and IPC-CC-830 standards. UVC 88B is also in full compliance with the RoSH Directive.

Typical Physical Properties

Product Name	UVC 88F conformal coatings
PROPERTIES OF UNCURED MATERIAL	
Appearance	Transparent pale yellow fluorescing liquid
Specific Gravity (ASTM D 1475-60)	1.02 g/cc
Viscosity (ASTM D-1384)	238 cp
Solvent (%)	0

PROPERTIES OF CURED MATERIAL	
Glass Transition Temperature (T _g) (ASTM D3418-82)	18 °C
C.T. E (ASTM E 831), PPM /°C	$\alpha_1 = 75$
Durometer Hardness (ASTM D-224)	A75
Humidity Resistance (85C/95RH, 120 days)(IPC-CC-830)	Pass
Flexibility (MIL-L-46058C)	Excellent
Adhesion (ASTM D2197)	Excellent
Moisture Absorption (ASTM D-570)	<0.5%
Extractable ions (MIL-STD-883E)	
Na ⁺	<5ppm
K ⁺	<5ppm
F ⁻	<5ppm
Cl ⁻	<10ppm
Thermal Performance	
Thermal Shock (-65/+125 °C) (IPC-CC-830)	100 cycles, Class 3
Temperature range for use	-50 to 110°C
Dielectric Strength (ASTM D-149)	2,500 V/mil
Dielectric Constant (ASTM D-1450)	3.2
Volume Resistivity (ASTM D-257)	2.1x 10 ¹⁶ ohms/cm

Recommended Curing Conditions

UVC 88F can complete the curing in a few seconds when exposed to one 365 watts per inch 365nm UV light (“H” lamp) with light intensity 2 – 5W/cm. The “shadowed” areas of the assembled board not exposed to UV light can be cured by secondary thermal cure at the desired temperature.

The thermal cure schedule:

110 °C 30 min

120 °C 15 min.

150 °C 5 min

Storage & Shelf Life

6 months provided materials are kept in a sealed original container at room temperature. Storage beyond this period can produce higher viscosity. Protect from UV light, moisture, evaporation and foreign materials. Process ability of these products can be adversely affected by evaporation and contamination.

Safety

UVC 88F is a friendly, non-toxic material. However, general hygiene practice is recommended when handling this material. For detailed information please consult our SDS.

Package

UVC 88F conformal coating is available in 55cc and 12oz. Other packages are available depending upon customer’s request. Contact YINCAE for order information.