

UVC 88G Biocompatible Hydrogel Coating Product Datasheet

Excellent Reworkability
Excellent Flexibility
Excellent Biocompatibility

Description

UVC 88G is a highly biocompatible, one part 100% solid dual cure polymer flexible hydrogel coating which has excellent chemical resistance, flexibility and moisture resistance. UVC 88G has excellent adhesion to standard solder mask, metallization, components and substrate materials; and is fully compatible with no-clean flux residue. After cure, UVC 88G 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 88G meets MIL-I-46058C and IPC-CC-830 standards. UVC 88G is also in full compliance with the RoSH Directive.

Typical Physical Properties

Product Name	UVC 88G conformal coatings
PROPERTIES OF UNCURED MATERIAL	
Appearance	Transparent pale yellow liquid
Specific Gravity (ASTM D 1475-60)	1.02 g/cc
Viscosity (ASTM D-1384)	300 – 500 cp
Solvent (%)	0

PROPERTIES OF CURED MATERIAL	
Glass Transition Temperature (Tg) (ASTM D3418-82)	5 °C
C.T. E (ASTM E 831), PPM /°C	$\alpha_1 = 85$
Durometer Hardness (ASTM D-224)	A65
Humidity Resistance (85C/95RH, 120 days)(IPC-CC-830)	Pass
Surface Insulation Resistance(IPC-J-STD-004)	Pass
Flexibility (MIL-L-46058C)	Excellent
Adhesion (ASTM D2197)	Excellent
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

Recommended Curing Conditions

UVC 88G 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 1hour

120°C 30 min.

150°C 15 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 88G 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 88G conformal coating is available in 55cc and 12oz. Other packages are available depending upon customer’s request. Contact YINCAE for order information.