Hysol

ECCOCOAT UV7993

January 2014

PRODUCT DESCRIPTION

ECCOCOAT UV7993 provides the following product characteristics:

Technology	Urethane
Appearance	Translucent yellow
Components	One-component
Product Benefits	• UV curable • Room temperature moisture cure for shadowed areas • One component • Solvent-free • Good moisture resistance • Excellent chemical resistance
Cure	Ultraviolet (UV) light activation followed by room temperature moisture cure
Application	Conformal coating
Operating Temperature	-40 to 130 °C
Typical Assembly Applications	Printed wire board

ECCOCOAT UV7993 is a conformal coating designed to provide rugged protection from moisture and harsh chemicals. It is compatible with industry standard solder masks, no-clean fluxes, metallization, components and substrate materials.

ECCOCOAT UV7993 meets MIL-I-46058C standards. ECCOCOAT UV7993 conforms to IPC-CC-830 requirements.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Brookfield Viscosity, mPa·s (cP)	120
Specific Gravity	1.04
Shelf Life @ 25°C, days	183
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Recommended UV Cure Condition

Medium pressure mercury vapor lamp:	
Light Intensity, W/in	200
Wavelength, nm	365

Moisture Cure for Shadowed Areas

50% relative humidity, 100 hours @ 25°C
>70% relative humidity, 50 hours @ 25°C

Areas hidden or shadowed from the UV light source will moisture cure at ambient temperature and humidity. No further processing is necessary.

The above cure profiles are guideline recommendations. Cure conditions (time and temperature) may vary based on customers' experience and their application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

Hardness, Shore A		80
Hardness, Shore D		60
Modulus	N/mm² (psi)	1,150 (166,650)

Electrical Properties

Volume Resistivity, ohm-cm @ 25ºC	2.2×10^{16}
Dielectric Strength, kV/mm	50
Dielectric Constant	3.34
Dissipation Factor	0.0131

TYPICAL PERFORMANCE OF CURED MATERIAL

Miscellaneous

Tensile Strength	N/mm² (psi)	35 (5,005)

GENERAL INFORMATION

For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS).

DIRECTIONS FOR USE

Surface preparation of assembled boards prior to applying ECCOCOAT UV7993 is not required. However, improved adhesion and reliability performance can be achieved when contaminants such as ionics, dust, salts and oils are cleaned from the assembled board ECCOCOAT UV7993 has been applied successfully using dip, spray, brush, and flow coating equipmentFinal coating thickness is influenced by board size, part geometry and application method**Dip coat operations:** A withdrawal rate of 5inches per minute results in a typical coating thickness of 3 mils. Time allowed for coating run-off before cure will also influence final coating thickness. Coating run-off time should be based on appropriate process factors including board size and component density**Spray and flow coating operations:** Solventless conformal coatings usually require modified operating procedures compared to solvent-based systems such as lower flow rate through the gun, increased atomization pressure to create a fine mist and spray gun location approximately 2 to 3 inches above the assembled boardEquipment parameters such as nozzle design, nozzle orientation and number of passes will impact final coating thickness

Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage : 25 °C

Avoid heat, light and moisture.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

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Not for product specifications
The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

Conversions
(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
MPa = N/mm²
MPa x 145 = psi
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

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Reference 0.4