UV3342LV-80 Technical Data Sheet

2021.1/7512

Dual-Cure UV3342LV-80

UV/Moisture-Cure Conformal Coating

Application

Conformal Coating

Features

UV Light Cure	Bright Blue Fluorescing
Secondary Moisture Cure	Excellent Adhesion
Solvent-Free	Chemical Resistance
Halogen-Free	Moisture Resistance
Low Odor	Thermal Shock Resistance

SEAYU® UV3342LV-80 is a single component, UV curable, acrylated polyurethane conformal coating that possesses excellent chemical resistance, thermal shock resistance and moisture resistance. The material is tack-free after exposure to UV light. A secondary moisture cure mechanism will cure unexposed areas of the coating at ambient conditions. This coating fluoresces a bright blue when exposed to UV light (365nm) for easy inspection of coating coverage. SEAYU® UV3342LV-80 is recognized under UL File Number E479913, and is in full compliance with the RoHS directives 2015/863/EU and 2011/65/EU.

Technical Data

Typical Properties of Uncured Material

Chemical Class	Acrylated Urethane
Appearance	Translucent Liquid
Density (g/cm^3)	1.05
Viscosity (mPa.s) *GB/T2794-2013*	60-120
Recommended Coating Thickness（μm）	25-75

Typical Curing Performance	
Recommended UV Cure Condition(s) *High pressure mercury vapor lamp:Intensity(50mW/cm^2)*	30
Recommended Moisture Cure Condition(h) *70% RH@ 25°C*	72

Yantai Seayu New Materials Co., Ltd.
Address: No. 12-2, Wolong Middle Road, Yantai, Shandong Province
Tel.: 0535-6687539 Fax: 0535-6687076 E-mail: chinaseayu@chinaseayu.com

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The above cure profiles are guideline recommendations. Cure conditions may vary based on customers' experience and their application requirements, as well as customer curing equipment.

Typical Properties of cured Material *Measured after UV cure followed by 7 days at 25°C / 70% RH*	
Hardness(A) *GB/T2411-2008*	70-80
Adhesion *GB/T 9286-1998*	5B
Tensile at Break(MPa)	1.6
Elongation at Break(%) *GB/T1040-2006*	52
Modulus of Elasticity(MPa) *at 25℃,DMA*	732
Glass Transition Temperature(˚C) *TMA*	6
Coefficient of Thermal Expansion（ppm/˚C） *TMA*	77/Below Tg 220/Above Tg
Water absorption (% @25℃, 24h) *ISO 62:2008*	0.32
Dielectric Withstand Voltage(V) *IPC-TM-650 2.5.7.1:2000*	>1500
Dielectric Constant(1 MHz)	3.04
Dissipation Factor(1 MHz)	0.012
Volume Resistivity(ohm-cm)	1.8×10^{16}
Surface Resistivity(ohm)	1.0×10^{16}
Comparative tracking index (CTI) *GB/T 4207-2012*	600
Flammability	UL 94V-0
Recommended Operating Temperature (℃)	-40 ~130
Moisture and Insulation Resistance *IPC-TM-650 2.6.3.4A(65 ℃/90%RH)*	Pass
Fungus Resistance *IPC-TM-650 2.6.1.1*	Pass
Temperature Shock Test *-40 to +110 ℃, 500 cycles*	Pass
Salt Spray Test *GB/T 1771-2007(168H)*	Pass

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Directions For Use

1. Exposure to ambient and artificial light should be kept to a minimum before curing.
2. All surfaces in contact with the material should be clean and free from flux residue, grease, mold release, or other contaminants before dispensing the material.
3. Curing speed depends on many variables, including lamp intensity, distance from the light source, required depth of cure, coating thickness and amount of material in shadowed areas.
4. UV curing with suitable UV lamps is mandatory. Moisture is used as a secondary cure mechanism for shadowed areas that cannot be cured with light, but the specified final properties cannot be achieved by humidity curing alone. Actual moisture cure time may vary depending on the layout and assembly of the printed circuit board, this reaction is completed within 7 days at ambient moisture.
5. This material may be dispensed with a variety of manual and automatic applicators or other equipment as required. The source air used for spraying must be dry (a dry inert gas is highly recommended) to prevent premature curing by the secondary cure mechanism. The spraying should be done with adequate ventilation . Final coating thickness is influenced by board size, part geometry and application method.
6. The product is a moisture curing material and care should be taken to protect process vessels and partial containers from moisture.

Clean Up

To flush equipment and clean uncured material, non-alcohol based solvents should be used.

Rework

Cured material is a highly cross linked UV cured coating.It has a high degree of environmental and chemical resistance and will be more difficult to remove than traditional conformal coatings. Thermal displacement, mechanical abrasion are suitable options for rework of cured material.

Packaging

1Kg/ barrel,5Kg/barrel

Storage

Store the material in a cool, dark, and dry place when not in use.

Resealing the container under dry inert gas, such as nitrogen, extends shelf life.

This material has a six-month shelf life from date of production when stored between 8°C and 28°C in the original, unopened container.

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Caution

Application of SEAYU® Conformal Coatings should be carried out in accordance with local and National Health and Safety regulations. Keep out of the reach of children. Use only in well-ventilated areas to avoid inhalation of vapours or spray. Avoid contact with skin and eyes. For more information on the safe handling of this material, please refer to the Material Safety Data Sheet before use.

Statement

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. SEAYU is,therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

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