瀚纳瑞
hanarey

Hanarey Chemicals (Shanghai) Co., Ltd.
No. 111 Muhua Road, Fengxian District, Shanghai, China 201507
瀚纳瑞化工(上海)有限公司 上海市奉贤区目华路111号 邮编:201507

HANAREY CSE9568 Product Data Sheet

Mar 2024

Hanarey CSE9568 is a UV and moisture cure conformal coating designed to protect electric circuits against extreme environments. It is a one-component material, and no mixing is needed before the application. CSE9568 demonstrates superior resistance to moisture and chemicals. Coating in shadow areas cures over time with ambient moisture. It is suitable for a variety of spraying processes. Its ability to UV cure tack free in seconds enables faster processing, greater output, and lower processing costs.

UNCURED PROPERTIES *

Property	Value	Test Method
Chemical Class	Acrylated Urethane	N/A
Appearance	Light Yellow Transparent Liquid	N/A
Density, g/ml	1.07	ASTM D1875
Viscosity, cP	60~200	HSTM 751‡
Shelf Life from Date of Manufacture	180 Days	N/A

CURED MECHANICAL PROPERTIES *¥

Property	Value	Test Method
Hardness	D50~D75 Ω	ASTM D2240
	D79	ASTM D2240
Tensile at Break, MPa	16.3	ASTM D638
Elongation at Break, %	2.0	ASTM D638
Modulus of Elasticity, MPa	803	ASTM D638
CTEα1, μm/m/˚C	97	ASTM E831
CTEα2, μm/m/˚C	221	ASTM E831

* Not Specifications
N/A Not Applicable
¥ Measured after UV cure followed by 10 days at 25°C/75% RH
Ω Measured after UV cure only
Cured by Dymax 5000-EC (all spectrum), 120 mW/cm² intensity, 30 s
‡ Hanarey Standard Test Method

OTHER CURED PROPERTIES *¥

Property	Value	Test Method
Boiling Water Absorption, % (2 h)	0.56	ASTM D570
Water Absorption, % (25˚C, 24 h)	0.10	ASTM D570
Linear Shrinkage, %	1.97	ASTM D2566
Glass Transition Tg, ˚C	62	ASTM D5418

ELECTRICAL PROPERTIES *¥

Property	Value	Test Method
Dielectric Constant (1 MHz)	3.11	ASTM D150
Dissipation (1 MHz)	0.026	ASTM D150
Dielectric Breakdown Voltage, kV/mm	70	HSTM D149 ‡
Volume Resistivity, ohm-cm	$4.9*10^{14}$	ASTM D257
Surface Resistivity, ohm	$9.6*10^{14}$	ASTM D257

ADHESION *¥

Substrate	Shear Strength/ Cross-Cut
PC / PCB	8.8 MPa #
PCB	5B

CLEAN UP

Uncured Hanarey materials may be removed from dispensing components and parts with non-alcoholic solvents. Cured material will be impervious to many solvents and difficult to remove. Cleanup of cured material may require mechanical methods such as ultrasonic bath, water, jet, vacuum tweezers, air knife and/or warming to aid in the removal.

瀚纳瑞
hanarey
Hanarey Chemicals (Shanghai) Co., Ltd.
No. 111 Muhua Road, Fengxian District, Shanghai, China 201507
瀚纳瑞化工(上海)有限公司 上海市奉贤区目华路111号 邮编:201507

TRANSPORTATION, STORAGE, AND SHELF LIFE

Do not crush and throw to avoid leakage during transportation. It is verified that the product is exposed to ambient temperature for a short time during transportation will not affect the product performance.

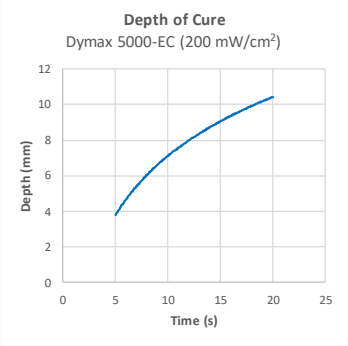
Store the material in a low-humidity, cool, and dark place when not in use. This product may polymerize upon prolonged exposure to ambient and artificial light as well as moisture. This material shelf life noted on page 1 of this document, when stored between 10°C (50°F) and 32°C (90°F) in the original, unopened container.

Resealing large containers under dry inert gas, such as nitrogen, can help maintain the shelf life. Smaller syringes and cartridges should be kept in moisture barrier bags with desiccant when not in use.

CURING GUIDELINES

First Step: light cure

The graph below shows the increase in depth of cure as a function of exposure time at Dymax 5000-EC 200 mW/cm^2. These depths are only due to light cure.



Second Step:＞ 7 days moisture cure

Full cure is best determined empirically by curing at different times and intensities and measuring the corresponding change in cured properties such as tackiness, adhesion, hardness, etc. Full cure is defined as the point at which more energy exposure no longer improves cured properties. Higher intensities or longer cures (up to 5x) generally will not degrade Hanarey light-curable adhesives.

Hanarey recommends that customers employ a safety factor by curing longer and/or at higher intensities than required for a full cure. Although Hanarey Application Engineering can provide technical support and assist with process development, each customer ultimately must determine and qualify the appropriate curing parameters required for their unique application.

Hanarey Chemicals (Shanghai) Co., Ltd.
No. 111 Muhua Road, Fengxian District, Shanghai, China 201507
瀚纳瑞化工(上海)有限公司 上海市奉贤区目华路111号 邮编:201507

GENERAL INFORMATION

This product is intended for industrial use only. Keep out of the reach of children. Avoid breathing vapors. Avoid contact with skin, eyes, and clothing. Wear impervious gloves. Repeated or continuous skin contact with uncured material may cause irritation. Remove material from the skin with soap and water. Never use organic solvents to remove material from the skin and eyes. For more information on the safe handling of this material, please refer to the Safety Data Sheet before use.

The data provided in this document are based on historical testing that Hanarey performed under laboratory conditions as they existed at that time and are for informational purposes only. The data are neither specifications nor guarantees of future performance in a particular application. Hanarey does not guarantee that this product's properties are suitable for the user's intended purpose. The contents of this document are subject to change. Unless specifically agreed to in writing, Hanarey shall have no obligation to notify the user about any change to its content.

Data Collected: Jan 2024
Date of Revision: 25 Mar 2024