DOWSIL™ CC-8030 UV and Moisture Dual Cure Conformal Coating

Description

One-part translucent UV and moisture dual curable coating or adhesive.

Uses / Applications

- E-motor
- Automotive boards & assemblies
- Power supplies & modules
- Power tools
- Control units
- Connectors pin/solder joint coverage
- Home appliances
- Rigid circuit boards

Benefits

- Low viscosity sprayable
- Fast UV cure with secondary moisture cure
- Broad spectrum and LED 365nm curable
- Reduced oxygen inhibition, tack-free surface after UV curing
- No added solvents
- Stress relieving
- UV indicator for easy inspection
- Good adhesion to most circuit board materials

Physical Properties

Specification Writers: These values are not intended for use in preparing specifications.

Reference	Property	Result	Unit
	One or Two Part	One	
CTM[1]0176	Color	Translucent	
CTM1067	Non-Volatile Content	97	%
CTM0050	Viscosity	520	cp
CTM0022	Specific Gravity, Cured	1	
CTM0099	Durometer	30	Shore A
	Broad Spectrum UV Cure	>2 (Broad Spectrum)	J/cm^2
	LED 365nm UV Cure	>20 (365nm)	J/cm^2
CTM0137	Tensile Strength	120	psi
CTM0137	Elongation	85	%
CTM0114	Dielectric Strength (Non-dried)	360	Volts/mil
CTM0249	Volume Resistivity (Non-dried)	5.80E13	ohm-cm
CTM0543	Dielectric Constant at 100 Hz	2.93	
CTM0543	Dielectric Constant at 100 kHz	2.93	
CTM0543	Dissipation Factor (Permittivity) 100 Hz	0.0033	
CTM0543	Dissipation Factor (Permittivity) 100 kHz	<0.002	

[1]CTM: Corporate Test Method, copies of CTM's are available on request.

Certifications

- UL 94 V-0

®™Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

© 2024–2026 The Dow Chemical Company. All rights reserved.

Form No. 11-4081-01-0426 S2D

Processing and Curing Guidelines

A broad spectrum “H” bulb or 365nm LED curing equipment is recommended :

- UV broad spectrum/ LED 365nm curable;
- No oxygen inhibition;
- 2J/cm^2 (broad spectrum) / 20J/cm^2 (LED 365nm) UV irradiation depth of cure up to 3+ mm;
- Secondary moisture cure: tack-free time 48-72 hours;
- Sprayable or needle dispense
- Recommended coating thickness 50 – 300 µm

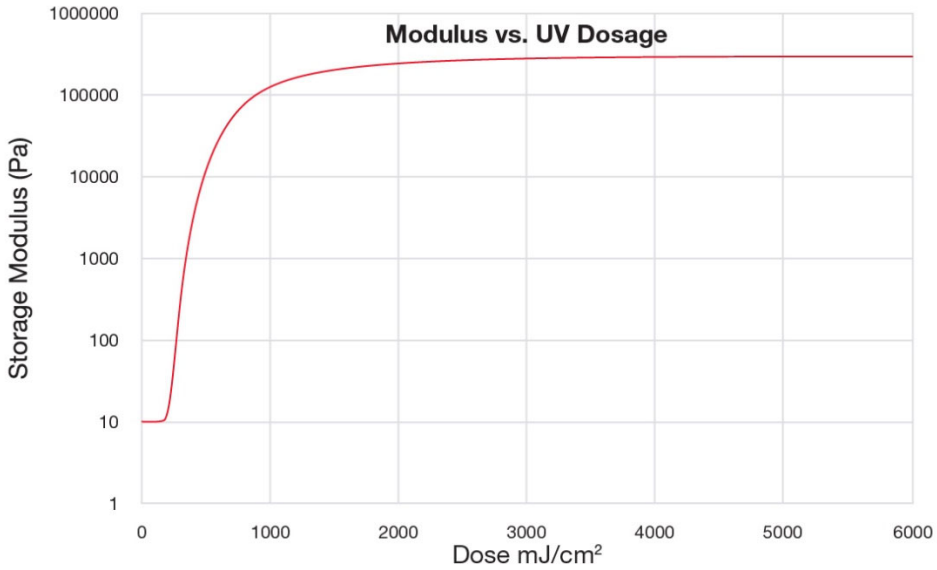


Figure 1: Modulus vs UV Dosage for "H" Bulb broad spectrum

The table below outlines the recommended dosage values that have been demonstrated to adequately cure DOWSIL™ CC-8030 with “H” bulb broad spectrum and LED 365nm UV lamps. Users should perform adequate testing to ensure appropriate cure with their selected equipment set. Note that conveyor speed and lamp height have an influence on coating cure level.

For optimal curing performance it is recommended to use a UV lamp with maximal intensity below 380nm. Lamp with higher UV B dosage will lead to faster curing of the coating.

The use of LED lamp of wavelength higher than 365nm is not recommended for similar reasons.

Broad Spectrum UV-Cure	
Dosage (UV A + UV B) (mJ/cm^2)	Cure Depth (mm)
700	1.3
1300	2.3
2000	3.6
4100	7.4

Approximate Cure Time Table	
Time (Seconds)	Intensity (mW/cm^2)
7	300
10	200
20	100
40	50

®™Trademark of The Dow Chemical Company (“Dow”) or an affiliated company of Dow

© 2024–2026 The Dow Chemical Company. All rights reserved.

LED 365nm UV-Cure	
Dosage (mJ/cm^2)	Cure Depth (mm)
16700	3
23000	3.3
27500	3.7
42000	3.9

Approximate Cure Time Table	
Time (Seconds)	Intensity (mW/cm^2)
4	5000
7	2500
17	1000
34	500

Useful Temperature Ranges

For most uses, silicone conformal coatings should be operational over a temperature range of -40 to 150°C (-40 to 302°F) for long periods of time. However, at both the low and high temperature ends of the spectrum, behavior of the materials and performance in particular applications can become more complex and require additional considerations. For low temperature performance, thermal cycling to conditions such as -40°C (-40°F) may be possible but performance should be verified for your parts or assemblies. Factors that may influence performance are configuration and stress sensitivity of components, cooling rates and hold times, and prior temperature history. At the high temperature end, the durability of the cured silicone elastomer is time and temperature dependent. As expected, the higher the temperature, the shorter the time the material will remain useable.

Handling Precautions

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE

Limitations

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

Health and Environmental Information

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.
For further information, please see our website, dow.com or consult your local Dow representative.

Disposal Considerations

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.
It is the user's responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Technical Representative for more information.

]

®™Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

© 2024–2026 The Dow Chemical Company. All rights reserved.

Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

dow.com

NOTICE: No freedom from infringement of any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other government enactments. The product shown in this literature may not be available for sale and/or available in all geographies where Dow is represented. The claims made may not have been approved for use in all countries. Dow assumes no obligation or liability for the information in this document. References to "Dow" or the "Company" mean the Dow legal entity selling the products to Customer unless otherwise expressly noted. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

© 2024–2026 The Dow Chemical Company. All rights reserved.