Technical data sheet

Product:	2888
Manufacturer:	DOWSIL
Product group:	KLEBSTOFF
Article group:	2-K KLEBSTOFF
Download:	29.05.2026

DOWSIL™ EI-2888 PRIMERLESS SILICONE

This data sheet was provided to you by Tewipack Uhl GmbH. The company tewipack Uhl GmbH assumes no responsibility for the topicality and the Accuracy of the information contained. The properties of the products can vary due to various influences such as composition and condition of the Substrate, impurities in or on the substrate, temperature and humidity at the Change storage and environmental conditions during use. Using this product in combination with other material, the customer is responsible for to check through our own tests whether the product is suitable for the planned combination and whether this combination delivers the expected results

Tewipack Uhl GmbH
Industriestraße 15
D-75382 Althengstett

Telephone:
+49(0)7051/9297-0
Fax:
+49(0)7051/9297-99

E-Mail:
info@tewipack.de
Website:
www.tewipack.de

Managing director:
Alexander Uhl,
Michael Uhl
HRB 330424
Amtsgericht
Stuttgart

Bank details:
Sparkasse
Pforzheim
Calw
BLZ 666 500
85
Konto 17 787

Commerzbank
Sindelfingen
BLZ 603 400 71
Konto 8 001 166

Vereinigte
Volksbank AG
Böblingen
BLZ 603 900 00
Konto 80 089
003

Postbank
Stuttgart
BLZ 600 100
70
Konto 146
294 708

Technical Data Sheet

DOWSIL™ EI-2888 Primerless Silicone Encapsulant

Optically clear, two-part 1:1 mix ratio, low viscosity, self-priming silicone encapsulant

Features & Benefits

- Room temperature cure with optional heat acceleration
- Low viscosity – ease of processing
- Self-priming – no primer needed
- Reliable optical performance under harsh conditions
- UL 94 recognized
- UL 746C f1 recognized – suitable for outdoor use (UV exposure and water immersion)

Applications

- DOWSIL™ EI-2888 Primerless Silicone Encapsulant is particularly suitable for encapsulating rigid and flexible circuit boards for indoor and outdoor LED lighting, explosion proof and high ingress protection rated luminaire as well as outdoor displays applications.

Typical Properties

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

Test[1]	Property	Unit	Result
	One or two-part		Two
	Mix ratio		1:1
CTM 0176B	Appearance		Clear
CTM 0050	Viscosity part A	mPa.s	2000
CTM 0050	Viscosity part B	mPa.s	2300
CTM 0050	Viscosity mixed	mPa.s	2700
ASTM D 4440	Gel time (G'=G") at 22°C[2]	h	8
CTM 0055	Pot life at 22°C[2]	min	130
ASTM D 2240	Durometer after 24 h	Shore 00	12 (22°C)–28 (50°C)
ASTM D 2240	Durometer after 3 days at 22°C	Shore 00	35
ASTM D 2240	Durometer after 7 days at 22°C	Shore 00	45
ASTM D 2240	Durometer after 21 days at 22°C	Shore 00	60
		Shore A	10

1. CTM: Corporate Test Method.
   ASTM: American Society for Testing and Materials.
2. Can vary due to environmental condition (humidity, mixing method).

Form No. 11-3969-01-0920 S2D

Typical Properties (Cont.)

Test	Property	Unit	Result
ASTM D 412	Tensile strength	MPa	0.2
ASTM D 412	Elongation	%	190
CTM 0243	Unprimed lap shear (AL)	MPa	0.17
CTM 0114	Dielectric strength	kV/mm	19
CTM 0249	Volume resistivity	Ohm*cm	1E + 16
ASTM D 1003	Light transmission @ 380 nm, 5 mm	%	91
ASTM D 1003	Light transmission @ 450 nm, 5 mm	%	94
ASTM D 1003	Light transmission @ 760 nm, 5 mm	%	95
	Shelf life at 22°C	months	12
UL 94	Flammability test		HB
UL 746C	Outdoor use (UV exposure & water immersion)		f1

Description

DOWSIL™ EI-2888 Primerless Silicone Encapsulant is supplied as two-part liquid component. When liquid components are thoroughly mixed either by weight or volume, the mixture cures at room temperature or with mild heat to a flexible elastomer, which is well suited for the protection of rigid and flexible circuit boards for indoor or outdoor LED Lighting, explosion proof and high ingress protection rated luminaire as well as outdoor displays.

Dow silicone encapsulants cure without exotherm at a constant rate regardless of sectional thickness or degree of confinement. This encapsulant contains its own source of moisture, so cure progresses evenly throughout the material and deep-section or confined space cures are possible.

Self-priming encapsulant develops reliable adhesion to a wide range of substrates at room temperature or with mild heat, without the need of primer. Only good cleaning may be needed.

Unlike other silicone chemistries, this product is insensitive to phenomena like platinum catalyst inhibition when exposed to contaminant, or material reversion when exposed to high temperature in a confined environment.

Dow silicone elastomers require no post cure and can be placed in service immediately following the completion of the cure schedule. They retain their original physical and electrical properties over a broad range of operating conditions which enhance the reliability and service life of devices.

Application Methods

- Automated static or dynamic metered mixing
- Manual mixing
- Flow, pour, or needle dispense

Processing/ Curing

Thoroughly mixed Dow silicone encapsulant may be poured/dispensed directly into the container in which it is to be cured. Care should be taken to minimize air entrapment. When practical, pouring/dispensing should be done under vacuum, particularly if the component being potted or encapsulated has many small voids. If this technique cannot be used, the unit should be evacuated after the silicone encapsulant has been poured/dispensed. Dow silicone encapsulants may be either room temperature (25°C/77°F) or heat cured (max 100°C/212°F). Room temperature cure encapsulants may also be heat accelerated for faster cure. Ideal cure conditions are given in the product selection table.

Time to cure is dependent on several variables including the method of application, film thickness, temperature and humidity. Gel time in the data table gives an indication of typical times to form a gel. Cure time for full cure are indications of time needed to develop full physical properties such as durometer, tensile strength or adhesion. These times, including full cure time, can be significantly reduced by introducing mild heat of 100°C/212°F or less. Below graphs are giving indication of % full cure vs. time at room temperature and time needed before handling material at various temperature (time to reach > 10% full cure).

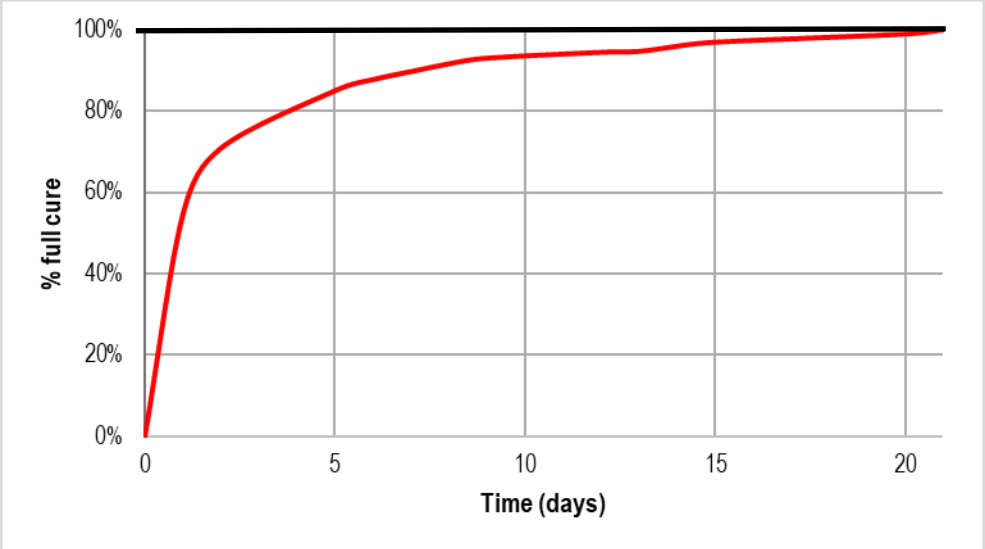

Figure 1: Curing evolution at room temperature

Recommended handling time vs curing temperature	
Temperature (°C)	Time (h)
25	10–12
50	6–7
80	3–4
100	1–2

Adhesion does not need the full cure schedule to develop, material can therefore be put in service before finishing the full cure schedule in majority of the cases. Optimum cure schedules should be determined in each new application.

Pot Life and Cure Rate

Cure reaction begins with the mixing process. Initially, cure is evidenced by a gradual increase in viscosity, followed by gelation and conversion to a solid elastomer. Pot life is defined as the time required for viscosity to double after DOWSIL™ EI-2888 Primerless Silicone Encapsulant Part A and DOWSIL™ EI-2888 Primerless Silicone Encapsulant Part B (base and curing agent) are mixed and is highly temperature and application dependent. Please refer to the data table. Gel time in the data table gives an indication of typical times to form a non-flowing gel. Cure time for full cure are indications of time needed to develop full physical properties such as durometer, tensile strength or adhesion.

Adhesion

Dow self-priming encapsulants are formulated to provide adhesion to most common substrates and materials. It is recommended to apply the encapsulant on clean and dry substrates. Due to the vast variety of substrates used, general statements on adhesion and bond strength are impossible. Appropriate adhesion testing should be performed to ensure the adhesion of the encapsulant is adequate for the end use.

As adhesion evolves with time during cure, adhesion will increase until full cure at room temperature. On certain difficult, low-surface energy surfaces, adhesion may be improved by priming or by special surface treatment such as chemical or plasma etching. To ensure maximum bond strength on a particular substrate, cohesive failure of the product in a lap shear or similar test is needed to ensure compatibility of the adhesive with the substrate being considered. Also, this test can be used to determine minimum cure time or to detect the presence of surface contaminants such as mold release agents, oils, greases and oxide films.

Useful Temperature Ranges

For most uses, silicone encapsulants should be operational over a temperature range of -45 to 200°C (-49 to 392°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. At high temperature ends (150°C and above), the optical performance of the material could be degraded even if the mechanical properties remain acceptable. The optical degradation is time and temperature dependent and should be evaluated for your specific application. For low-temperature performance, thermal cycling to conditions such as -55°C (-67°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.

Usable Life and Storage

Special precautions must be taken to prevent moisture from contacting this product. Containers should be kept tightly closed and head or air space minimized. Partially filled containers should be purged with dry air or other gases, such as nitrogen. The product should be stored in its original packaging with the cover tightly attached to avoid any contamination. Store in accordance with any special instructions listed on the product label. The product should be used by its Use Before date as indicated on the product label.

Packaging Information

Multiple packaging sizes are available for this product. Please contact your local distributor or Dow representative for information on packaging size and availability.

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.

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