

## MULTI-CURE® 9-20601 THERMAL SHOCK RESISTANT CONFORMAL COATING

### DESCRIPTION

Dymax Multi-Cure 9-20601 forms a tough clear circuit encapsulant upon exposure to longwave UV light or visible light. Multi-Cure 9-20601 is excellent for encapsulating, potting, sealing and bonding. Coating resists yellowing, vibration, impact and thermal shock. The coating exhibits excellent adhesion to most solder masks, and Multi-Cure 9-20601 has secondary heat cure capability. This product is in full compliance with RoHS directives 2015/863/EU.

### TYPICAL UNCURED PROPERTIES

Solvent Content	None	
Composition	100% Solids	
Appearance	Clear/Straw	
Solubility	Isopropyl alcohol	
Toxicity	Low	
Flash Point	>95°C (200°F)	
Viscosity	2,500 cP (nominal)	ASTM D-1084

### TYPICAL CURED PROPERTIES

#### *PHYSICAL*

Durometer Hardness	D60	ASTM D-2240
Elongation at Break	120%	ASTM D-638
Tensile at Break	3,000 psi	ASTM D-638
Modulus of Elasticity	35,000 psi	ASTM D-638
Thermal Limit	-55° to 200°C	DSTM* D-200
Water Absorption (24 h)	1.2%	ASTM D-570
Boiling Water Absorption (2 h)	3.2%	ASTM D-570
Volume Shrinkage	6.2%	
Refractive Index	1.50	ASTM D-1218
Dielectric Constant, 1 MHz	3.27	ASTM D-1304

\*DSTM refers to Dymax Standard Test Method

### TYPICAL CURE DATA

UV Light - Using 365 nm wavelength UV light <sup>[1]</sup>:

	Cure Time (seconds)	Intensity <sup>[2]</sup> mW/cm <sup>2</sup>	Dymax Light-Welder® Lamps
Fixture between glass slides	>1	20	2000-EC
Nominal cure depth (0.25 inch)	33	20	2000-EC
Tack free cure time	27	150	5000-EC
	3	2,500	3010-EC

### HEAT CURE FOLLOWING UV EXPOSURE

Heat can be used as a secondary cure mechanism where all adhesive cannot be cured with UV light. UV cure must be done prior to heat cure. Heat cure by itself will not cure the coating to a tack-free state. The following cure schedule may be used:

110°C	225°F	1 hour (minimum)
120°C	250°F	30 minutes
150°C	300°F	15 minutes

### **DISPENSING AND HANDLING ADHESIVE**

Dymax 9-20601 is available in various packages such as syringes, cartridges, bottles, and pails. It may be dispensed with a variety of automatic bench-top syringe applicators or other equipment as required. Direct questions relating to dispensing and curing systems for specific applications to Dymax Technical Representatives.

### **STORAGE AND SHELF LIFE**

Store material in cool, dark place when not in use. Do not expose to UV light or sunlight. Material may polymerize upon prolonged exposure to ambient light. Replace lid immediately after use. This material has an 18-month shelf life from date of manufacture, unless otherwise specified, when stored between 10°C (50°F) and 35°C (90°F) in the original, unopened container.

### **CAUTION**

This product is intended for industrial use only. Avoid breathing vapors. In case of inhalation, remove to fresh air and seek medical attention if symptoms persist. Avoid contact with skin, eyes, and clothing. In case of inhalation, remove to fresh air and seek medical attention if symptoms persist. In case of skin contact, immediately wash with soap and water for at least 15 minutes. In case of eye contact, flush thoroughly with water and get medical attention. Wash clothing before reuse. Keep out of reach of children. Do not take internally. In case of ingestion, see Section 4 of Material Safety Data Sheet. Workers should wear impervious gloves and eye protection. Repeated or continuous skin contact with uncured adhesive will cause irritation and should be avoided. Never use solvents to remove adhesive from skin and eyes. For specific information, refer to the Material Safety Data Sheet before use.

## **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 skin with soap and water. Never use organic solvents to remove material from 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 Dymax 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. Dymax does not guarantee that this product's properties are suitable for the user's intended purpose.

Numerous factors—including, without limitation, transport, storage, processing, the material with which the product is used, and the ultimate function or purpose for which the product was obtained—may affect the product's performance and/or may cause the product's actual behavior to deviate from its behavior in the laboratory. None of these factors are within Dymax's control. Conclusions about the behavior of the product under the user's particular conditions, and the product's suitability for a specific purpose, cannot be drawn from the information contained in this document.

It is the user's responsibility to determine (i) whether a product is suitable for the user's particular purpose or application and (ii) whether it is compatible with the user's intended manufacturing process, equipment, and methods. Under no circumstances will Dymax be liable for determining such suitability or compatibility. Before the user sells any item that incorporates Dymax's product, the user shall adequately and repetitively test the item in accordance with the user's procedures and protocols. Unless specifically agreed to in writing, Dymax will have no involvement in, and shall under no circumstances be liable for, such testing.

Dymax makes no warranties, whether express or implied, concerning the merchantability of this product or its fitness for a particular purpose. Nothing in this document should be interpreted as a warranty of any kind. Under no circumstances will Dymax be liable for any injury, loss, expense or incidental or consequential damage of any kind allegedly arising in connection with the user's handling, processing, or use of the product. It is the user's responsibility to adopt appropriate precautions and safeguards to protect persons and property from any risk arising from such handling, processing, or use.

The specific conditions of sale for this product are set forth in Dymax's Conditions of Sale which are available at <https://www.dymax.com/index.php/en/resources/sales-terms-conditions>. Nothing contained herein shall act as a representation that the product use or application is free from patents owned by Dymax or any others. Nothing contained herein shall act as a grant of license under any Dymax Corporation Patent.

Except as otherwise noted, all trademarks used herein are trademarks of Dymax. The "®" symbol denotes a trademark that is registered in the U.S. Patent and Trademark Office.

The contents of this document are subject to change. Unless specifically agreed to in writing, Dymax shall have no obligation to notify the user about any change to its content.