

ULTRA FAST™ 9-318-F

UV/VISIBLE CURING PEELABLE MASK

DESCRIPTION

Dymax Ultra Fast 9-318-F mask is a very fast curing, solvent-free resin designed for either manual or fully automated masking of printed circuit boards prior to wave soldering or conformal coating operations. This 100% solvent-free, low odor urethane acrylate resin, cures in seconds and fluoresces brightly under black light. Cured masks withstand wave solder temperatures and peel easily without leaving silicone, ionic contamination or corrosive residues.

Dymax Ultra Fast 9-318-F mask cures in seconds, "on demand", when exposed to "worker-friendly", visible and long wave (365 nanometer) UV light, or with lamps combining short and longwave UV. Dymax 9-318-F requires neither long drying time nor heat curing. Printed circuit boards are immediately ready for coating or soldering without need for racking or waiting.

TYPICAL UNCURED PROPERTIES

Solvent Content	None - 100% Reactive Solids	
Silicone Content	None	
Chemical Class	Urethane (Meth) Acrylate	
Appearance	Translucent Gel	
Solubility	Alcohols/Chlorinated Solvents/Ketones	
Toxicity	Low	
Flash Point	>93°C (200°F)	
Viscosity (20 rpm)	50,000 cP (nominal)	ASTM D-2556

TYPICAL CURED PROPERTIES

PHYSICAL

Durometer Hardness	A75	ASTM D-2240
Elongation at Break	100%	ASTM D-638
Tensile at Break	500 psi	ASTM D-638
Modulus of Elasticity	800 psi	ASTM D-638
Water Absorption (24 hr)	11%	ASTM D-570

PRODUCT USE DATA

Application

Dymax Ultra Fast 9-318-F is available in 10 mL, 30 mL, and 180 mL cartridges for easy automated dispensing from standard pressure-fed dispensing equipment.

Curing

Cure time and depth of cure are dependent upon intensity and wavelength of the UV light source used. Suggested UV curing equipment is shown in Table I, below.

Table I Recommended UV Curing Systems				
Light Source	Light Type	Intensity @ 365 nm mW/cm ² [1]	Typical Cure Time, to 1/4" depth	Application
Dymax Light-Welder® 5000-EC or PC-5	Moderate intensity	100	5 seconds	Curing beads over a 5" x 5" area
Dymax Light-Welder® PC-3	Wand-type spot	1,000	2 seconds	Curing small areas 0.35" dia.

Dymax Light-Welder® PC-3D	Combination dispenser/wand type spot	1,000	2 seconds	Curing small areas 0.35" dia.
Fusion "D" bulb	Highest intensity beam	2000	<1 seconds	Fastest curing

© 1997, 1998 Dymax Corporation

MD® Medical Device Adhesives is also a registered trademark of Dymax Corporation

The data contained in this bulletin which represents typical results, is furnished for information only, and is believed to be reliable. We cannot assume responsibility for results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any product or method mentioned herein and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use thereof. Nothing in this bulletin is to be interpreted as a representation of freedom from domination of patents owned by others or a license under a Dymax Corporation patent. We recommend that each prospective user test the proposed application before repetitive use, using the data as a guide. For specific information, refer to Material Safety Data Sheet before use.

STORAGE AND SHELF LIFE

Do not expose to UV light source or sunlight. Ultra Fast 9-318-F has a one year shelf life when stored below 32°C (90°F) out of sunlight in original, unopened container. Do not expose to UV light source or sunlight.

CAUTION

For industrial use only. Avoid breathing vapors. Avoid contact with eyes and clothing. In case of contact, immediately flush with water for at least 15 minutes; for eyes, get medical attention. Wash clothing before reuse. Keep out of reach of children. Do not take internally. If swallowed, vomiting should be induced at once and a physician called. For specific additional information, refer to the product Material Safety Data Sheet before use.

NOTES

[1] Nominal intensity measured at a predetermined distance. Listed intensity is not the maximum output of the lamp.