

Ultra Light-Weld® 9-20318 UV/Visible Light-Curable, Peelable Mask

DESCRIPTION

DYMAX Ultra Light-Weld® 9-20318 mask is a very fast-curing, solvent-free resin designed for either manual or fully automated masking of PC boards prior to soldering or conformal coating operations. This 100% solvent-free, low-odor, urethane acrylate resin cures in seconds. Cured masks withstand wave solder temperatures and easily peel from the PC board without leaving silicone, ionic contamination, or corrosive residues.

DYMAX Ultra Light-Weld® 9-20318 mask cures in seconds, "on demand", when exposed to "worker-friendly", visible and longwave (365 nm) UV light, or with lamps combining short and longwave UV. DYMAX 9-20318 requires neither long drying time nor heat curing. PC boards are immediately ready for coating or soldering without the need for racking or waiting. This product is in full compliance with the RoHS Directives 2002/95/EC and 2003/11/EC.

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	
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

This material may be dispensed with a variety of manual and automatic applicators or other equipment as required. Questions relating to dispensing and curing systems for specific applications should be referred to DYMAX Applications Engineering.

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 on the next page.



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	10 seconds	Curing beads over a 5" x 5" area
DYMAX Light-Welder® PC-3	Wand-type spot	1000	<10 seconds	Curing small areas 0.35" dia.
DYMAX Light-Welder® PC-3D	Combination dispenser/wand-type spot	1000	<10 seconds	Curing small areas 0.35" dia.
Fusion® "D" bulb	Highest intensity beam	2000	<5 seconds	Fastest curing

STORAGE AND SHELF LIFE

Do not expose to UV light source or sunlight. Ultra Light-Weld® 9-20318 has a minimum 12-month shelf life from date of shipment, unless otherwise specified, when stored below 32°C (90°F) out of sunlight in original, unopened container. Contents may crystallize during cold shipment or storage. Gentle warming to 40°C [100°F] will return it to original condition.

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's 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.

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