ULTRA-FAST™ 9-20515
Red, Peelable Mask

- **Wave Solderable**
- **Peels Easily**
- **In-Line Mask, No Racks**

INTRODUCTION

DYMAX Ultra-Fast™ mask 9-20515 cures almost instantly upon exposure to UV or visible light. Ultra Light-Weld® adhesives increase productivity, lower assembly costs, and enhance worker safety. DYMAX Light-Welder® UV lamps provide optimum process flexibility. They allow the user to select the optimum combination of adhesive and cure mechanism to meet individual process and performance requirements.

DESCRIPTION

DYMAX Ultra-Fast™ 9-20515 mask is a very fast-curing, red, 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. Cured masks withstand wave solder temperatures and peel easily without leaving silicone, ionic contamination, or corrosive residues. DYMAX Ultra-Fast™ 9-20515 is nonstringing and nonslumping for fast and extremely accurate automated dispensing.

DYMAX Ultra-Fast™ 9-20515 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 9-20515 requires neither long drying time nor heat curing. Printed circuit boards are immediately ready for coating or soldering without need for racking or waiting. This product is in full compliance with RoHS directives 2015/863/EU.

TYPICAL UNCURED PROPERTIES

Solvent Content	None - 100% reactive solids	
Silicone Content	None	
Chemical Class	Urethane (Meth) Acrylate	
Appearance	Red Gel	
Solubility	Alcohols/Chlorinated Solvents/Ketones	
Toxicity	Low	
Flash Point	>93°C (200°F)	
Viscosity (20 rpm)	75,000 cP (nominal)	ASTM D-2556

TYPICAL CURED PROPERTIES

PHYSICAL

Durometer Hardness	A50	ASTM D-2240
Elongation at Break	140%	ASTM D-638
Tensile at Break	700 psi	ASTM D-638
Modulus of Elasticity	700 psi	ASTM D-638
Water Absorption (24 hr)	18%	ASTM D-570

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PRODUCT USE DATA

Application

DYMAX Ultra-Fast™ 9-20515 is available in 10 or 30 mL syringes, 170, 300, or 550 mL cartridges, and 15 liter pails 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/cm² [1]	Typical Cure Time, to 1/8" depth	Application
DYMAX PC-3	High intensity	1000	3 seconds	Where curing area of ¼" diameter or less is required
DYMAX Light-Welder® 5000-EC	Moderate intensity	100	5 seconds or 5 ft/min	Where curing area of 5" x 5" or less is required
DYMAX Light-Welder® 2000-EC	Moderate intensity	50	10 seconds or 4 ft/min	Where curing area of 8" x 8" or less is required
Fusion "D" bulb	Highest intensity beam	2000	<1 second or 28 ft/min	Fastest curing or where curing area of more than 8" x 8" is required

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

STORAGE AND SHELF LIFE

Store the material in a cool, dark place when not in use. Do not expose to light. This product may polymerize upon prolonged exposure to ambient and artificial light. Keep covered when not in 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

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.

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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.

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