108-MSK
Fluorescing Face Mask Adhesive

APPLICATIONS	FEATURES	BONDS	BIO-APPROVALS
• **Bonding Respiratory Face Masks**	• **Cures in Seconds Through UV-Blocked Plastics** • **Fluoresces Under Black Lights**	• **PVC** • **Polycarbonate** • **Polystyrene** • **Polyurethane** • **ABS**	• **Primary Skin Study, ISO 10993** • **Elution, USP23, and ISO 10993**

Dymax MSK MD® adhesives are solvent free and cure only upon exposure to UV or visible light. Their ability to cure in seconds enables faster processing, greater output, and lower assembly costs. When cured with Dymax spot, focused-beam, or flood lamps, they deliver optimum speed and performance for medical device assembly while enhancing worker safety.

TYPICAL UNCURED PROPERTIES

Solvent Content	None - 100% Solids	
Composition	Urethane Oligomer/(Meth)Acrylate Monomer Blends	
Appearance	Clear/Light Amber Liquid	
Flash Point	>93°C (200°F)	
Solubility	Alcohol/Chlorinated Solvents	
Toxicity	Low	
Viscosity (20 rpm)	600 cP (nominal	ASTM D-1084

TYPICAL CURED PROPERTIES

PHYSICAL		
Durometer Hardness	D70	ASTM D-2240
Tensile at Break	3,000 psi	ASTM D-638
Elongation at Break	40%	ASTM D-638
Modulus of Elasticity	100,000 psi	ASTM D-638
Thermal Range (brittle/degrades)	-55° to +180°C (-65° to +350°F)	DSTM D-200*
Water Absorption (24 hr)	6.0%	ASTM D-570
Boiling Water Absorption (2 hr)	5.0%	ASTM D-570
Linear Shrinkage	2.3%	ASTM D-2566

*DSTM Refers to Dymax Standard Test Method

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TYPICAL LIGHT-CURE DATA

Lamp	5000-EC	BlueWave® 75	UVC-6 Conveyor*
Light Type Lamp Type	UV/Visible 5" x 5" Flood	UV/Visible 3/16" Spot	UV/Visible 1" x 6" Focused Beam
Maximum Lamp Intensity @ 365 nm Intensity @ Time Of Test @ 365 nm	300 mW/cm^2 150 mW/cm^2	4000 mW/cm^2 1800 mW/cm^2	8000+ mW/cm^2 4000 mW/cm^2
Adhesive Absorption Range (nm) Equipment Output Range (nm)	300-500 300-500	300-500 300-500	300-500 300-500
Cure Speed (Sec) Fixture Between Glass Slides Tack-Free Surface Cure Nominal Cure Depth (0.125")	 <1 5 1	 <1 5 <1	 <1 <1 <1
Cure Depth In 1 Minute (Inch)	>1	>1	>1

* Equipped with Fusion "D" lamp

The required intensity and cure time should be determined during the initial process validation stage. Factors that should be considered during process validation which can affect the adhesive cure rate and depth of cure include, but are not limited to, the part geometry, bond-gap size, percent light transmission through the substrate at 365 nm and 436 nm, distance from the light source to the adhesive bond area, UV and visible light intensity and spectral output of the light source, the desired margin of safety to be built into the process, and minimum and maximum exposure times.

DISPENSING AND HANDLING ADHESIVE

Dymax 108-MSK may be dispensed with a variety of automatic bench-top syringe applicators or other equipment as required. Any questions relating to dispensing and curing systems for specific applications should be referred to Dymax Application Engineering.

STORAGE AND SHELF LIFE

Store in original, light-blocking container. Do not expose to any light source. This product is light sensitive and should be stored in a dark area when not in use. This product has a one-year shelf life from date of shipment, unless otherwise specified, when stored between 10°C (50°F) and 32ºC (90°F) in original, unopened container.

BIOCOMPATIBILITY & STERILIZATION

This product has not been submitted for USP class VI biocompatibility certification. This PDS will be updated whenever such certification is completed. In all cases, it is the user's responsibility to determine and validate the suitability of these adhesives in the intended medical device.

SME Technical Paper #AS91-397, 1991 advises that, "All adhesives are toxic in their raw or uncured state. Complete cure… is required to retain Class VI certification status." It is recommended that biocompatibility testing of the completed device be done following sterilization to eliminate the effects of minor process variations and contamination during assembly. The sterilization methods of choice are gamma irradiation and ethylene oxide. Sterilization by autoclaving may be limited to certain applications. Gamma irradiation is known to polymerize unsaturated systems. However, it remains the user's obligation to ascertain the effectiveness of such a procedure.

SAFETY

Wear impervious gloves and/or barrier cream. Repeated or continuous skin contact with liquid adhesive will cause irritation and should be avoided. Do not wear absorbent gloves. Remove adhesive from skin with soap and water. Never use solvents to remove adhesive from skin or eyes.

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 information, refer to the Material Safety Data Sheet before use.