1182-M
Fluorescing, Rigid, Medical Device Adhesive

APPLICATIONS

- **Tube Sets & Fittings**
- **Transducer Assembly**

FEATURES

- **Fluoresces for Visual or Automated Inspection**
- **Low Viscosity**
- **Clear Bondlines**

BONDS

- **Polycarbonate**
- **PVC**
- **ABS**
- **Polysulfone**
- **Acrylic**

BIO-APPROVALS

- **ISO 10993-Elution Systemic Injection, Intracutaneous, Implantation, Hemolysis**
- **USP Class VI requirements are met as a result of the ISO 10993 tests conducted**

Dymax 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 MEDI-CURE® spot, focused beam, or flood lamps, they deliver optimum speed and performance for medical device assembly while enhancing worker safety.

MD Medical Device adhesive, 1182-M, is a very low viscosity, fast UV and visible light curing adhesive developed for use in bonding a variety of plastic medical devices. Thin bondlines are clear and colorless; thicker sections may exhibit a slight amber color. Cured 1182-M adhesives, passes USP Class VI testing. Bond strengths on polycarbonate and rigid PVC usually exceed the strength of those substrates. The fluorescing ability of the 1182-M permits in-line quality inspection of the adhesive bond upon exposure to 365 nm “black light”. This product is in full compliance with RoHS directives 2015/863/EU.

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	Alcohols/Chlorinated Solvents/Ketones	
Toxicity	Low	
Viscosity	60 cP (nominal)	ASTM D-1084

TYPICAL CURED PROPERTIES

PHYSICAL

Durometer	D80	ASTM D-2240
Elongation at Break	6%	ASTM D-638
Tensile at Break	11,000 psi	ASTM D-638
Modulus of Elasticity	540,000 psi	ASTM D-638
Water Absorption (24 h)	59%	ASTM D-570
Dielectric Strength	650 Volts/Mil	ASTM D-149

Created 10/01/99 REV. 12/27/2018

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TYPICAL LIGHT CURE DATA

Lamp	5000-EC	MC-4000	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**	300mW/cm^2 150mW/cm^2	4000mW/cm^2 1800mW/cm^2	8000+mW/cm^2 4000mW/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 10 6	 1 6 6	 1 5 5
Cure Depth in 1 Minute (inch)	1.2	1.2	1.2

*Equipped with a Fusion "D" bulb

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 effect the adhesive cure rate and depth of cure include: the part geometry, bond-gap size, percent light transmittance through the substrate at 365 nm and/or 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, etc. For specific technical recommendations relating to the application, please call Dymax Technical Service at (860) 482-1010.

DISPENSING AND HANDLING ADHESIVE

Dymax 1182-M 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 the Dymax Application Engineering.

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.

BIOCOMPATIBILITY & STERILIZATION

Dymax Medical Device adhesives are subjected to various biocompatibility tests in accordance with USP Class VI and/or ISO 10993 recommendations for disposable medical devices. The completed tests are identified on each Product Data Sheet, certificate copies of which are available upon request. Unless otherwise noted on the PDS, these adhesives have not been tested for prolonged or permanent implantation. 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.

1182-M Product Data Sheet

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.

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