



# Sonite™ LM-1

## White Epoxy Laminating Resin

### Product Overview

LM-1 is a white epoxy resin formulation intended specifically for hand laminating. The recommended hardener - Sonite 08 - provides a low-viscosity and rapid room-temperature cure. This combination is used to impregnate fiberglass reinforcement which is then applied over a suitable surface (gel) coat such as SC-2 to form strong, laminated plastic tools having high strength and excellent dimensional stability. LM-1 has good wetting characteristics and contains only enough thixotropic agents to minimize runoff from vertical surfaces.

### Technical Overview

#### Key Values:

~**Mixing Ratio:** 100 Parts LM-1 to 20 parts Sonite 08 by weight

~**Pot Life:** 30 minutes (1 lb. in a one-pint can)(ASTM D 2471-71)

~**Color:** White (mixed)

~**Gel Time:** 8-ply laminate sets tack-free in 3 hours. Thickness of 8-ply laminate= 1/8 inch

<u>PROPERTIES *</u>	<u>COLOR</u>	<u>VISCOSITY</u>	<u>SPECIFIC GRAVITY</u>	<u>SPECIFIC VOLUME</u>
LM-1	White	4,500/6,000 cps	1.33	20.8
Sonite 08	Clear Amber	1,000 cps	1.05	26.4
Mixed:	White	2,000 cps	1.27	21.8

	<u>24 Hours</u>	<u>48 Hours</u>
Tensile Strength (ASTM D 638-84).....	25,000 psi.....	26,000 psi
Flexural Strength (ASTM D 790-84).....	30,000 psi.....	33,000 psi
Compressive Strength (edgewise) (ASTM D 695-84).....	21,000 psi.....	24,000 psi
Coefficient of Thermal Expansion .....	1.7 x 10 <sup>-5</sup> in./in./°C	

\*All tests performed and all samples cured at 25° C. Laminates lay up by hand with contact pressure only using Type 1500 glass cloth with Volan A finish.

### Preparation

***Applying A Release Agent . . .*** A release agent is necessary to facilitate demolding when casting #20-136 into or over most surfaces. You can purchase a suitable release agent from Smooth-On or your Smooth-On distributor. A liberal coat of release agent should be applied onto all surfaces that will contact #20-136. ~**IMPORTANT:** To ensure thorough coverage, lightly brush the release agent with a soft brush over all surfaces of the model. Let the release agent dry for 30 minutes before casting #20-136. **Because no two applications are quite the same, a small test application to determine suitability for your project is recommended if performance of this material is in question.**

## **Measuring & Mixing**

***Measuring & Mixing . . .*** Materials should be stored and used in a warm environment (72° F / 22° C). This product has a limited shelf life and should be used as soon as possible. The proper mixing ratio is 100 Parts of LM-1 resin to 20 Parts Sonite 8 hardener by weight. You must use an accurate scale (gram scale or triple beam balance scale) to weigh these components properly. Do not attempt to measure components by volume. Mixing tools and containers should be clean and dry. Mixing should be done in a well ventilated area. Wearing latex gloves and long sleeve garments will help minimize skin contact. Combine LM-1 with the appropriate amount of Sonite 8 hardener. Mix thoroughly for 3 minutes making sure that you scrape the bottom and sides of the container several times.

## **Caution**

LM-1 is irritating to the eyes and skin. Avoid prolonged or repeated skin contact to prevent possible sensitization. Use only with adequate ventilation. If contaminated, flush eyes with water for 15 minutes and seek medical attention. Remove from skin with waterless hand cleaner, soap and water.

Sonite 08 vapor causes burns to the eyes. May burn skin and cause sensitization. Vapors irritate the respiratory tract. . If contaminated, flush eyes with water for 15 minutes and seek medical attention. Remove from skin with soap and water. Use only with adequate ventilation.

## **Disclaimer**

The information contained in this bulletin is considered accurate. However, no warranty is expressed or implied regarding this accuracy, the results to be obtained from the use thereof, or that any such will not infringe a patent. User shall determine beforehand the suitability of this product for the intended application and assume all risk and liability in connection therewith.

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