MAS
TIME SAVING EPOXY RESINS

LV RESIN
FAST, MEDIUM & SLOW HARDENERS

LOW VISCOSITY LAMINATING EPOXY RESIN SYSTEM

TECHNICAL DATA BULLETIN

SYSTEM BENEFITS:

MAS Low Viscosity (LV) Resin with MAS Fast, Medium or Slow Hardeners is a non-blushing, low viscosity, low odor epoxy resin system. It can be used for laminating, filleting, and gluing. It has a simple 2 to 1 by volume mix ratio, easily wets out fiberglass fabric and requires no messy washdowns. MAS Fillers such as phenolic microballoons, colloidal silica or wood flour may be added to the epoxy resin to make compounds for bonding, fairing, filleting, or filling. LV Resin can be combined with FLAG Resin to create a custom viscosity resin. Fast, Medium and Slow Hardeners can be combined to create custom gel times.

- Easy to use 2:1 mix ratio by volume
- Non-blushing system that requires no wash downs between laminations
- Choose between three hardener speeds or mix them for custom gel times

HANDLING PROPERTIES	FAST	MEDIUM	SLOW	Test Method
Resin Density at 25°C, lbs/gal	9.5	9.5	9.5	ASTM D1475
Hardener Density at 25°C, lbs/gal	8.6	8.4	8.4	ASTM D1475
Resin Viscosity at 25°C, cP	1,000	1,000	1,000	ASTM D2196
Hardener Viscosity at 25°C, cP	470	400	400	ASTM D2196
Mix Ratio by Weight	100A : 46B	100A : 45B	100A : 45B	Calculated
Mix Ratio by Volume	2A : 1B	2A : 1B	2A : 1B	Calculated
Initial Mixed Viscosity 25°C, cP	650	600	600	ASTM D2196
Gel Time at 25°C, 150g mass, min.	10	25	40	ASTM D2471
Tack Free Time at 25°C, hours	2	3	5	Thin Film
Full Cure at 25°C, days	2	3.5	5	
Minimum Recommended Temp, °F	55	55	55	

PHYSICAL PROPERTIES	FAST	MEDIUM	SLOW	Test Method
Color	Clear	Clear	Clear	Visual
Izod Impact, Notched, ft-lb/in	1.06	0.78	0.89	ASTM D256
Tensile Strength, psi	7,700	8,000	7,300	ASTM D638
Tensile Modulus, psi	380,000	390,000	360,000	ASTM D638
Tensile Elongation, %	7.5	7.0	6.7	ASTM D638
HDT, Post Cure, °F	126	126	126	ASTM D648
Compressive Strength, psi	9,500	9,900	8,900	ASTM D695
Flexural Strength, psi	11,600	11,600	10,200	ASTM D790
Flexural Modulus, psi	330,000	360,000	330,000	ASTM D790
Cured Density, g/cm^3 (lbs/in^3)	1.14 (0.041)	1.13 (0.041)	1.13 (0.041)	ASTM D792
Volumetric Shrinkage, %	4.4	4.4	3.1	ASTM D792/2196
Hardness, Shore D	84	8	83	ASTM D2240
Tg, Midpoint, °F	133	133	132	ASTM D3418

MIXING AND HANDLING:

Combine the resin and the hardener at the specified mix ratio. Using the recommended mix ratio is VERY important when using epoxy. DO NOT deviate to attempt to speed up or slow down the gel time. Mix 1-2 minutes while scraping sides and bottom of container occasionally until fully blended with no streaks or striations. Always use clean dry tools for mixing and applying. Material temperatures should not be below 55°F when mixing.

STORAGE AND CRYSTALLIZATION:

Store between 60-90°F in a dry place. After use, tightly reseal all containers and store products on a raised surface during cold weather and avoid storing near outside walls or doors. If available, purge with dry nitrogen to preserve color and minimize moisture contamination. Do not allow to freeze during winter storage. Do not use material with any signs of crystallization such as solid chunks, grainy texture or white color. Crystallization can be reversed by heating the material to 125-140°F, and stirring occasionally, until all crystals dissolve.

SAFETY HANDLING:

Wear protective gloves, clothing, and eye/face protection. Use only outdoors or in a well-ventilated area. Avoid contact to the skin and eyes. Avoid breathing dust, fumes, gas mist, vapors and spray. Wash hands thoroughly after handling. Take off contaminated clothing and wash before reuse. These products may cause skin and respiratory allergic reactions. Consult product Safety Data Sheets for complete precautions for use of this product.

Endurance Technologies, Inc. has experience only in the compounding of resins and hardeners and not in the actual manufacture of tools or parts. Each piece is different. The user should run tests to assure the suitability of the system for use in a particular application. The test data and results set forth herein are based on laboratory work and do not necessarily indicate the results that the buyer or user will attain.

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