# MAS TRADITIONAL MARINE SYSTEM

WOOD LAMINATING SYSTEM

**TECHNICAL DATA BULLETIN**

## SYSTEM BENEFITS:

MAS Traditional Marine Resin with MAS 510 Fast, 520 Medium or 320 Clear Hardeners is a low viscosity epoxy resin system. It can be used for laminating, filleting, and gluing. Used for over 20 years in the Carolinas to build sport fishing boats, and now available to consumers. Use with 510 Fast or 520 Medium hardeners for layup applications and 320 Clear for clear coating and finishing applications.

- Familiar 5:1 or 3:1 mix ratios
- Cost effective laminating system for a variety of parts including wood laminating
- Choose the speed of hardener based on your needs

| HANDLING PROPERTIES | 510 FAST | 520 SLOW | 320 CLEAR | Test Method |
|---|---|---|---|---|
| Resin Density at 25°C, lbs/gal | 9.5 | 9.5 | 9.5 | ASTM D1475 |
| Hardener Density at 25°C, lbs/gal | 8.8 | 8.5 | 8.6 | ASTM D1475 |
| Resin Viscosity at 25°C, cP | 1,000 | 1,000 | 1,000 | ASTM D2196 |
| Hardener Viscosity at 25°C, cP | 780 | 130 | 350 | ASTM D2196 |
| Mix Ratio by Weight | 100A : 18B | 100A : 18B | 100A : 30B | Calculated |
| Mix Ratio by Volume | 5A : 1B | 5A : 1B | 3A : 1B | Calculated |
| Initial Mixed Viscosity 25°C, cP | 1,000 | 700 | 900 | ASTM D2196 |
| Gel Time at 25°C, 150g mass, min. | 13 | 24 | 20 | ASTM D2471 |
| Minimum Recommended Temp, °F | 60 | 60 | 60 | |

| PHYSICAL PROPERTIES | 510 FAST | 520 SLOW | 320 CLEAR | Test Method |
|---|---|---|---|---|
| Color | Amber | Amber | Clear | Visual |
| Izod Impact, Notched, ft-lb/in | 0.73 | 0.64 | 0.76 | ASTM D256 |
| Tensile Strength, psi | 11,000 | 9,300 | 9,400 | ASTM D638 |
| Tensile Elongation, % | 6.7 | 5.7 | 6.3 | ASTM D638 |
| HDT, Room Temp Cure, °F | 141 | 129 | 128 | ASTM D648 |
| HDT, Room Temp Cure, °F | 173 | 154 | 167 | ASTM D648 |
| Compressive Strength, psi | 14,600 | 14,300 | 13,300 | ASTM D695 |
| Flexural Strength, psi | 18,200 | 17,700 | 16,100 | ASTM D790 |
| Flexural Modulus, psi | 493,000 | 491,000 | 429,000 | ASTM D790 |
| Cured Density, g/cm$^3$ (lbs/in$^3$) | 1.18 (9.8) | 1.18 (9.8) | 1.17 (9.8) | ASTM D792 |
| Volumetric Shrinkage, % | 4.7 | 5.0 | 4.9 | ASTM D792/2196 |
| Hardness, Shore D | 86 | 86 | 88 | ASTM D2240 |

## INSTRUCTIONS FOR USE:

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 60°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.



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