



**TECHNICAL DATA BULLETIN**

## HIGH PERFORMANCE 2:1 EPOXY RESIN SYSTEM

TotalBoat High Performance 2:1 Epoxy Resin with TotalBoat 2:1 Fast, Medium or Slow Hardeners is a non-blushing, low viscosity, low odor epoxy laminating resin system that may be used for a wide variety of applications. It has a simple 2 to 1 mix ratio by volume, easily wets out fiberglass fabric and requires no messy wash downs. When combined with any additional fillers, TotalBoat 2:1 High Performance Epoxy Resin creates an excellent adhesive, filleting, and fairing compound.

### HANDLING PROPERTIES

|                                     | <u>FAST</u> | <u>MEDIUM</u> | <u>SLOW</u> | <u>Test Method</u> |
|-------------------------------------|-------------|---------------|-------------|--------------------|
| Resin Density at 77°F, lbs/gal      | 9.3         | 9.3           | 9.3         | ASTM D1475         |
| Hardener Density at 77°F, lbs/gal   | 8.6         | 8.4           | 8.4         | ASTM D1475         |
| Resin Viscosity at 77°F, cP         | 1,000       | 1,000         | 1,000       | ASTM D2196         |
| Hardener Viscosity at 77°F, cP      | 470         | 400           | 400         | ASTM D2196         |
| Mix Ratio By Volume                 | 2A : 1B     | 2A : 1B       | 2A : 1B     | Calculated         |
| Mix Ratio By Weight                 | 100A : 46B  | 100A : 45B    | 100A : 45B  | Calculated         |
| Initial Mixed Viscosity at 77°F, cP | 650         | 600           | 600         | ASTM D2196         |
| Gel Time at 77°F, 150g mass, min.   | 10          | 25            | 40          | ASTM D2471         |
| Tack-Free Time at 77°F, hrs.        | 2           | 3             | 5           | Thin Film          |
| Full Cure at 77°F, days             | 2           | 3.5           | 5           |                    |
| Minimum Recommended Temp., °F       | 55          | 55            | 55          |                    |

### PHYSICAL PROPERTIES

|   | <u>FAST</u>  | <u>MEDIUM</u> | <u>SLOW</u>  | <u>Test Method</u> |
|---|--------------|---------------|--------------|--------------------|
| 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          |
| Heat Deflection Temperature, °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 <sup>3</sup> (lbs/in <sup>3</sup> ) | 1.14 (0.041) | 1.13 (0.041)  | 1.13 (0.041) | ASTM D792          |
| Volumetric Shrinkage, %                                 | 4.4          | 4.4           | 3.1          | ASTM D792/1475     |
| Hardness, Shore D                                       | 84           | 83            | 83           | ASTM D2240         |
| Tg, Midpoint, °F  | 133          | 133           | 132          | ASTM D3418         |





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### **INSTRUCTIONS FOR USE:**

**SURFACE PREPARATION:** All surfaces must be clean, dry and free of surface contamination. Light sanding is recommended, followed by an oil-free solvent wipe or a clean cloth moistened with either isopropyl alcohol or plain water to remove dust. Aluminum should be etched prior to bonding. Porous surfaces should be precoated with unthickened epoxy/hardener. **MIXING:** Mix ratio 2:1 (two parts RESIN to one part HARDENER). Mix for 1-2 minutes, add fillers if needed. The cure reaction of TotalBoat Epoxy is an exothermic (heat-producing) reaction. The peak exotherm will vary according to ambient temperature and choice of hardener. For more information, please call the Jamestown Distributors Tech Team at 1-800-497-0010 or visit us online at [www.JamestownDistributors.com](http://www.JamestownDistributors.com).

### **STORAGE:**

Store at 60-90°F in a dry place. After use, tightly reseal all containers. Store products on a raised surface off the floor during cold weather and avoid storing near outside walls or doors. Epoxy resins that are contaminated with dust or moisture, or are subjected to low temperatures may crystallize. Do not use material that has any sign of crystallization until it has been liquified. A crystallized resin or hardener can be returned to its original state by heating the material to 140°F to 150°F and stirring until it returns to the liquid state.

### **SAFETY HANDLING:**

Work in well-ventilated areas using gloves, eye protection and clothing protection. Avoid contact to the skin and eyes. Avoid clothing contamination. Wash thoroughly after handling. These products may cause skin and respiratory allergic reactions. Consult Safety Data Sheets (SDS) for complete precautions with this product.

Jamestown Distributors 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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