



# 510

**Description:**

Orca 510 is a Low styrene V/E, thixotropic, non-waxed resin designed for fabrication of small to large FRP parts at an ambient temperature. Orca 510 is pre-promoted for curing at room temperature with the addition of methyl ethyl ketone peroxide (MEKP) initiator. Orca 510 is designed to be used with both the spray-up and hand lay application technique.

**Features:**

- Extremely fast wet out and Roll out
- Good Mechanical Strength
- Low styrene emission
- High Elongation
- High Impact Strength
- Corrosive resistance
- Superior Adhesion Property
- Below 35% VOC

**Uses:**

- Yacht/Boat Construction/Blister Repair
- Manufactured parts
- Spray up process
- Hand Lay-up application
- Mold Making

**TYPICAL PROPERTIES** \*1

**Uncured Resin**

| <u>Test</u>             | <u>Value</u>      |
|-------------------------|-------------------|
| Viscosity, 77° F        | 550 cps           |
| Specific Gravity, 77° F | 1.05              |
| Curing Property, 77° F  | 1% MEKP 9% active |
| Gel Time, 77° F         | 20 minutes        |
| Time to Peak            | 23-38 minutes     |
| Peak Exothermic Temp.   | 266-304° F        |

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\* 1. Values are representative.  
Specification limits are available upon request.

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## Orca 510 LH V/E Resin

### Cured Resin \*2

| <u>Test</u>            | <u>Value</u> |
|------------------------|--------------|
| Tensile Modulus        | 499,614 psi  |
| Tensile Strength       | 13,300 psi   |
| Flexural Strength      | 21,300 psi   |
| Flexural Modulus       | 540,000 psi  |
| Elongation (%)         | 4.30%        |
| Barcol Hardness, 934-1 | 42           |
| Heat Distortion Temp.  | 255° F       |

### Laminated Physical Properties \*3

| <u>Test</u>       | <u>Value</u> |
|-------------------|--------------|
| Tensile Modulus   | Pending      |
| Tensile Strength  | Pending      |
| Flexural Strength | Pending      |
| Flexural Modulus  | Pending      |

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\* 2. Thickness : 3 mm  
After Cure: 158° F × 6hrs

\* 3. #450 Chopped Strand Mat 4 plies  
Glass Content: 27.6 %  
After Cure : 158° F × 6hrs

### Handling & Storage

As with all vinyl ester resin, rate and degree of cure are a function of initiator concentration and of temperature. Resin and work area should be between 70°F and 95°F to ensure satisfactory results. Initiator levels should be within a range of 1.0-2.2% based on weight of resin. The use of initiator levels outside of this range may result in an inadequate cure, with laminates exhibiting moderate to severe post cure after demolding.

Orca 510 is available in 55-Gallon metal drums, Totes.

To ensure maximum stability and maintain optimum resin properties, resins should be stored in closed containers at temperatures below 75°F and away from heat sources and sunlight. All storage areas and containers should conform to local fire and building codes. Drum stock should be stored away from all sources of flame or combustion. Inventory levels should be kept to a reasonable min with first-in, first-out stock rotation.

### Safety

#### **Read and understand the Material Safety Data Sheet before working with this product**

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