

## ORCA 216 Low Styrene, Low VOC Ortho/DCPD Polyester Resin



# 216R 216F 216E

### Description:

Orca 216E, 216F and 216R are Low Styrene, Low VOC Ortho/DCPD GP, thixotropic, polyester resins designed for fabrication of small to large FRP parts at an ambient temperature. Orca 216E, 216F and 216R are pre-promoted for curing at room temperature with the addition of methyl ethyl ketone peroxide (MEKP) initiator. Orca 216E, 216F and 216R are designed to be used with both the spray-up and hand lay-up application technique.

### Features:

- Extremely fast wet out and Roll out
- Low Styrene Ortho
- Low VOC Ortho (below 35% VOC)
- Thixotropic
- Moderate trim time
- Early development of Barcol Hardness
- Little or no pattern transfer through gel-coat surfaces

### Uses:

- Yacht/Boat Construction
- Manufactured parts
- Spray up process
- Hand Lay-up application

### TYPICAL PROPERTIES\*1

#### Uncured Resin

#### Test

<u>Test</u>	<u>Value</u>
Viscosity, 77°F	(E) 400-600cps (F) 600-800cps (R) 800-1000cps
Specific Gravity, 77°F	1.0-1.2
Curing Property, 77°F	1% MEKP 9% active ORCA 981
Gel Time 77°F	Varies
Time to Peak	Varies
Thixotropic Index	3.0-3.5
Volatile Content	31%-34.9%

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

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## Cured Resin\*2

<u>Test</u>	<u>Value</u>
Tensile Strength	8,847 psi
Tensile Modulus	145,038 psi
Flexural Strength	16,679 psi
Flexural Modulus	552,885 psi
Barcol Hardness, 934-1	45
HDT	145°F-160°F

## Laminated Physical Properties\*3

<u>Test</u>	<u>Value</u>
Tensile Strength	16,645 psi
Tensile Modulus	996,634 psi
Flexural Strength	21,500 psi
Flexural Modulus	882,320 psi
Barcol Hardness, 934-1	65.0

\*2 Thickness: 3mm; Post Cure: 176°F x 6hrs

\*3 #450 Chopped Strand 3 plies; Post Cure: 176°F x 6hrs

## Handling & Storage

As with all polyester 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 216E, 216F and 216R are available in 55-Gallon metal drums and 5 Gal Pails.

To ensure maximum stability and maintain optimum resin properties, resins should be stored in closed containers at temperatures below 77°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 Safety Data Sheet before working with this product**

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