



# 301

**Description:**

Orca 301 is an ISO, thixotropic, polyester resin designed for fabrication of small to large FRP parts at an ambient temperature. Orca 301 is pre-promoted for curing at room temperature with the addition of methyl ethyl ketone peroxide (MEKP) initiator. Orca 301 is designed to be used with both the spray-up and hand lay application technique.

**Features:**

- Extremely fast wet out and Roll out
- ISO
- Thixotropic
- Moderate trim time
- High Strength
- Corrosive resistance

**Uses:**

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

**TYPICAL PROPERTIES \*1**

**Uncured Resin**

<u>Test</u>	<u>Value</u>
Viscosity, 77° F	400-430cps
Specific Gravity, 77° F / 77° F	1.1
Curing Property, 77° F	1% MEKP 9% active
Gel Time	12-15 minutes
Time to Peak	35-50
Peak Exothermic Temp.	60-90

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

**Cured Resin \*2**

The information herein is general information designed to assist customers in determining whether Orca products are suitable to their applications. Orca products are intended for sale to industrial and commercial customers. We require customers to inspect and test our products before use and to satisfy themselves as to contents and suitability for their specific applications. **Nothing herein constitute any warranty express or implied, including any warranty of merchantability or fitness for a particular purpose**, nor is any protection from any law or patent to be inferred. The exclusive remedy for all proven claims is limited to replacement of our materials and in no event shall we be liable for special, incidental or consequential damages.

## Orca 301 ISO Polyester Resin

<u>Test</u>	<u>Value</u>
Tensile Strength	8,516psi
Flexural Strength	16,606psi
Flexural Modulus	596,130psi
Tensile Modulus	454,195psi
Barcol Hardness, 934-1	48
Elongation(%)	1.7%

### Laminated Physical Properties \*3

<u>Test</u>	<u>Value</u>
Tensile Strength	16,323psi
Flexural Strength	25,123psi
Flexural Modulus	1,206,454psi
Tensile Modulus	1,107,099psi
Elongation(%)	1.4%

REF: Approved by Lloyd's Register of Shipping

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

\* 3. #450 Chopped Strand Mat 4 plies  
Glass Content: 32 %  
After Cure : 158° F × 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 301 is available in 55-Gallon metal drums.

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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