

Orca 301 ISO Polyester Resin



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
- Good adhesion with gel coat
- Good impregnation
- 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	400-500 cps
Specific Gravity, 77°F / 77°F	1.1
Curing Property, 77°F	1% MEKP 9% active ORCA 981
Gel Time	varies
Time to Peak	varies
Thix index	2.2-2.6
Peak Exothermic Temp.	140°F-194°F

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Cured Resin *2

<u>Test</u>	<u>Value</u>
Tensile Strength	8,532 psi
Flexural Strength	16,637 psi
Flexural Modulus	597,380 psi
Tensile Modulus	455,021 psi
Barcol Hardness, 934-1	48
Elongation(%)	1.7
Heat Dist. Temp.	194°F

Laminated Physical Properties *3

<u>Test</u>	<u>Value</u>
Tensile Strength	16,352 psi
Flexural Strength	25,168 psi
Flexural Modulus	1,208,650 psi
Tensile Modulus	1,109,114 psi
Elongation(%)	1.4

REF: Approved by Lloyd's Register of Shipping

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

*2 Thickness: 3 mm

After Cure: 176°F x 2hrs, 248°F x 2hrs

*3 #450 Chopped Strand Mat 4 plies

Glass Content: 33%

After Cure: 176°F x 2hrs, 248°F x 2hrs

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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