

Technical Data Sheet for Fiberglass Warehouse Ortho Laminating GP Polyester Resin

According to ISO 11014:2010

Date: 18-Dec-2023

Section 1: Description

Fiberglass Warehouse Ortho Laminating General Purpose Polyester Resin is a thixotropic resin designed for fabrication of small to large FRP parts at an ambient temperature. It is pre-promoted for curing at room temperature with the addition of methyl ethyl ketone peroxide (MEKP) initiator. Designed to be used with both the spray-up and hand lay application technique.

Features:

- Extremely fast wet out and roll out
- Ortho
- 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

Section 2: Typical Properties*1

Uncured Resin:

| Test | Value |
|---------------------------------|----------------------------|
| Viscosity, 77° F | 400-500 cps |
| Specific Gravity, 77° F / 77° F | 1.21 |
| Curing Property, 77° F | 1% MEKP 9% active ORCA 981 |
| Ge1 Time 77° F | Variable |
| Time to Peak | Variable |
| Thix Index*1 | 1.7-2.2 |
| Peak Exothermic Temp. | 122° F- 158° F |
| Elongation | 2.5% |

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The information herein is general information designed to assist customers in determining whether Fiberglass Warehouse products are suitable to their applications. Fiberglass Warehouse 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.

^{* 1. 6}RPM/60RPM (Brookfield Viscometer)

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Cured Resin*2:

| Test | Value |
|------------------------|-------------|
| Tensile Strength | 11,313 psi |
| Flexural Strength | 15,228 psi |
| Flexural Modulus | 436,564 psi |
| Tensile Modulus | 682,532 psi |
| Barcol Hardness, 934-1 | 45 |
| Water Absorption | .25% |

Laminated Physical Properties*3:

| Test | Value |
|------------------------|---------------|
| Tensile Strength | 15,954 psi |
| Flexural Strength | 26,832 psi |
| Flexural Modulus | 1,111,791 psi |
| Tensile Modulus | 1,450,377 psi |
| Barcol Hardness, 934-1 | 54 |
| Glass Content | 31 5% |

* 2. Thickness: 3 mm

After Cure: 230°F x 2hrs

* 3. #450 Chopped Strand Mat 2 plies

#570 Roving Cloth 2 plies Glass Content: 40 % After Cure: 104°F x 16hrs

Section 3: Handling & Storage

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.

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Fiberglass Warehouse Ortho Resin is available in Quarts, Gallons, pails and 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.

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

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