

OPR™

Orthophthalic Polyester Resin



Building
&
Transportation



Oil, Gas
&
Industrial



Offshore
&
Onshore



Water
&
Wastewater



PRODUCT DESCRIPTION

CTech-LLC® OPR™ is a low styrene emission unsaturated polyester resin based on orthophthalic acid. Excellent glass fiber wet out properties and easiness of application is characteristic for OPR™ orthophthalic polyester resin.

OPR™ resin is pre-accelerated unsaturated polyester resin with moderate gel time and very low peak exotherm.

TECHNICAL DATA

	Unit	OPR™
Viscosity	mPas	1400
Specific Gravity	gm/cc	1.1
Styrene Content	%	41
Shelf Life	monthS	6

TYPICAL CURING CHARACTERISTICS

	Unit	OPR™
Gel Time at 23° C	min	45
Peak Exotherm °C	-	80

* Catalyzed at 1 % by weight with MEKP

PROPERTY OF CURED

	Unit	OPR™
Barcol Hardness	-	45
Heat Deflection Temperature	°C	66
Flexural Strength @ 50°C	Mpa	90
Flexural Modulus @ 50°C	MPa	4100
Tensile Strength @ 50°C	MPa	55
Tensile Modulus @ 50°C	MPa	3600
Tensile Elongation @ Break	%	2

ADVANTAGES

- Thixotropic polyester resin
- good mechanical properties
- Excellent glass fiber wet out properties

- Good corrosion resistance
- Good physical strength properties

TYPICAL USES

OPR™ polyester resin is suitable for manufacturing numerous FRP products for the building and construction, transportation and marine markets.

INSTALLATION PROCEDURE

Mixing

- Shake well before using. To initiate hardening add MEKP Hardener in a ratio of 1%.
- The ratio of hardener may be adjusted to compensate for temperature extremes. Add up to 50% more hardener when cooler temperatures exist and correspondingly less when warmer.

APPLICATION

- Resins can be applied using spray-up, hand lay-up and filament winding methods.
- Apply orthophthalic polyester resin at a temperature between 15 and 20°C.

STORAGE & SHELF LIFE

- To ensure maximum stability and maintain optimum properties, OPR™ orthophthalic polyester resin should be stored in closed containers, maintained below 20°C and away from heat sources and sunlight.
- Shelf life: 6 months unopened.

CTech-LLC®

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IMPORTANT NOTE:

Before using any CTech-LLC® product, the user must review the most recent version of the product's technical data sheet, material safety data sheet and other applicable documents, available at www.ctech-llc.com.

WARANTY:

CTech-LLC® warrants its products to be free from manufacturing defects. Buyer determines suitability of product for use and assumes all risks. Buyer's sole remedy shall be limited to replacement of product. Any claim for breach of this warranty must be brought within one month of the 'date of purchase. CTech-LLC® shall not be liable for any consequential or special damages of any kind, resulting from any claim or breach of warranty, breach of contract, negligence or any legal theory. The Buyer, by accepting the products described herein, agrees to be responsible for thoroughly testing any application to determine its suitability before utilizing.
