

POLYLITE® 440-500
Standard orthophthalic polyester resin

DESCRIPTION

POLYLITE® 440-500 is a medium reactive non-thixotropic orthophthalic polyester resin with a built-in accelerator system giving relatively long gel time, rapid curing, and low exothermic temperature.

POLYLITE® 440-500 is a RTM-resin.

APPLICATION

- POLYLITE® 440-500 impregnates the glassfibre rapidly and is suited for resin transfer molding.

FEATURES

- Low viscosity
- Medium reactivity
- Approvals

BENEFITS

- Good flow properties
- Excellent fibre wetting
- Good curing
- Low peak
- Short demoulding time
- Bureau Veritas
Det norske Veritas, DNV, grade 2
Lloyd's Register of Shipping
Germanischer Lloyd
Russian Maritime register

The information herein is general information designed to assist customers in determining whether our products are suitable for their applications. Our 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. We warrant that our products will meet our written specifications. **Nothing herein shall constitute any other 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. All patent rights are reserved. 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.

TYPICAL PROPERTIES

PHYSICAL DATA IN LIQUID STATE AT 23°C

Properties	Unit	Value	Test method
Viscosity - Cone & Plate	mPa·s(cP)	280-330	ISO 2884-1999
Specific gravity / Density	g/cm ³	1.10	ISO 2811-2001
Styrene content	% weight	41 ± 2	B070
Flash point	°C	32	ASTM D 3278-95
Gel time: 1% NORPOL PEROXIDE 1 (MEKP)	minutes	30-40	G020
Storage stability from date of manufacture	months	6	G180

TYPICAL NON-REINFORCED CASTING PROPERTIES

Fully post cured

Properties	Unit	Value	Test method
Tensile strength	MPa	50	ISO 527-1993
Tensile modulus	MPa	4600	ISO 527-1993
Tensile elongation	%	1.6	ISO 527-1993
Flexural strength	MPa	90	ISO 178-2001
Flexural modulus	MPa	4000	ISO 178-2001
Impact strength, P 4 J	MPa	5.0-6.0	ISO 179-2001
Volume shrinkage	%	7-8	ISO 3521-1976
Heat distortion temp.	°C	65	ISO 75-1993

STORAGE

To ensure maximum stability and maintain optimum resin properties, resins should be stored in closed containers at temperatures below 24°C/75°F and away from heat ignition sources and sunlight. Resin should be warmed to at least 18°C/65°F prior to use in order to assure proper curing and handling. All storage areas and containers should conform to local fire and building codes. Copper or copper containing alloys should be avoided as containers. Store separate from oxidizing materials, peroxides and metal salts. Keep containers closed when not in use. Inventory levels should be kept to a reasonable minimum with first-in, first-out stock rotation.

Additional information on handling and storing unsaturated polyesters is available in Reichhold's application bulletin "Bulk Storage and Handling of Unsaturated Polyester Resins." For information on other Reichhold resins or initiators, contact your sales representative or authorized Reichhold distributor.

SAFETY

READ AND UNDERSTAND THE MATERIAL SAFETY DATA SHEET BEFORE WORKING WITH THIS PRODUCT

Obtain a copy of the material safety data sheet on this product prior to use. Material safety data sheets are available from your Reichhold sales representative. Such information should be requested from suppliers of all products and understood prior to working with their materials.

DIRECTLY MIXING ANY ORGANIC PEROXIDE WITH A METAL SOAP, AMINE, OR OTHER POLYMERIZATION ACCELERATOR OR PROMOTER WILL RESULT IN VIOLENT DECOMPOSITION