REICHHOLD

PRODUCT BULLETIN

February 2013

POLYLITE® 420-571

RTM-RESIN

DESCRIPTION

POLYLITE® 420-571 is a medium reactive orthophthalic polyester resin with relatively high heat resistance and good mechanical properties.

POLYLITE® 420-571 is specially designed for resin transfer moulding and vacuum injection moulding.
POLYLITE® 420-571 is non-thixotropic and has a built-in accelerator system giving long gel time and improved curing.

For vacuum foil infusion laminates, the secondary bonding must be tested, especially for thick laminates that obtain a high degree of cure and no air inhibition. Improved secondary bonding can be obtained using a vinyl ester as DION® 9500-700 in combination with proper sanding.
Alternatively and better, a primer as Yachtcare G4 urethane primer can be used, possibly in combination with sanding.
Refer to our technical information "Adhesion for Secondary lamination".

APPLICATION

POLYLITE® 420-571 is specially designed for resin transfer moulding and vacuum infusion moulding

- Industrial products.
- Boats

FEATURES	BENEFITS
• Long gel time	• Suitable for products needing long filling time.
• Low viscosity	• Improved glass fibre wet-out and fast resin flow
• Improved shelf life	• Stabilized for prolonged shelf life at elevated temperatures.
• Approvals	• Det norske Veritas, DNV, grade 2 Lloyd's Register of Shipping Germanischer Lloyd

919-990-7500 • 800-448-3482 • P.O. Box 13582, Research Triangle Park, NC 27709 USA • 2400 Ellis Road, Durham, NC 27703 USA • www.reichhold.com

Reichhold, P.O.Box 2061, N-3202 Sandefjord, Norway, Tel. +47 33 44 86 00, Fax + 47 33 44 86 01

TYPICAL PROPERTIES

PHYSICAL DATA IN LIQUID STATE AT 23°C

Properties	Unit	Value	Test method
Viscosity - Cone & Plate	mPa·s(cP)	160-175	ISO 2884-1999
Specific gravity / Density	g/cm³	1.10	ISO 2811-2001
Acid number (max.)	mgKOH/g	25	ISO 2114-1996
Styrene content	% weight	44 ± 2	B070
Flash point	°C	32	ASTM D 3278-95
Gel time: 1% NORPOL® PEROXIDE 1 (MEKP	minutes	75-85	G020
Storage stability from date of manufacture	months	6	G180

TYPICAL NON-REINFORCED CASTING PROPERTIES

Fully post-cured

Properties	Unit	Value	Test method
Density	g/cm³	1.19	ISO 1183-87
Tensile strength	MPa	65	ISO 527-1993
Tensile modulus	MPa	4200	ISO 527-1993
Tensile elongation	%	1.5	ISO 527-1993
Flexural strength	MPa	100	ISO 178-2001
Flexural modulus	MPa	4200	ISO 178-2001
Impact strength, P 4 J	mJ/mm²	5-6	ISO 179-1993
Volume shrinkage	%	6-7	ISO 3521-1997
Heat distortion temp.	°C	82	ISO 75-1993
Hardness Barcol	934-1	45	ASTM D 2583-99
Water absorption - After 28 days	%	0.6-0.7	ISO 62-1999

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