

POLYLITE® 444-888
Low styrene emission resin for general purpose

DESCRIPTION

POLYLITE® 444-888 is a medium reactive orthophthalic laminating resin for general purpose.

POLYLITE® 444-888 is thixotropic and pre-accelerated.

APPLICATION

- Prolonged storage or unfavorable storage conditions may cause slight separation, hence agitation of the resin before use is recommended.
- In common with other pre-accelerated polyesters gel time drift occurs on storage. To compensate for this more peroxide may be required.

FEATURES

BENEFITS

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| <ul style="list-style-type: none"> • Low viscosity • Long pot life and rapid cure • Low exotherm • Approval | <ul style="list-style-type: none"> • Rapid and efficient fiber wet-out in both spray and hand lay-up • Fast mould turn round • Relatively short green-trimming stage • Enable thick sections to be fabricated • Less risk of distortion, discoloration, pre-release, or damage to mould surface • Lloyd's Register of Shipping |
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The information herein is to help customers determine whether our products are suitable for their applications. Our products are intended for sale to industrial and commercial customers. We request that customers inspect and test our products before using them to satisfy themselves as to contents and suitability. 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 protection from any law or patent to be inferred. All patent rights are reserved. The exclusive remedy for all proven claims is 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

Property	Unit	Value	Test method
Viscosity Brookfield LV at 25°C, spindle 2 at 12 rpm	mPa.s (cP)	900 – 1100	2460-001
Viscosity Cône & Plan	mPa.s (cP)	190 – 220	2470-001
Specific gravity	g/cm ³	1,08 – 1,12	2100-001
Volatiles content	% weight	42 – 46	2530-001
Acid value	mgKOH/g	30	2000-001
Flash point	°C	32	ASTM D 3278-95
Gel time at 25°C + 2% BUTANOX M50	Minutes	13 – 17	2160-021
Storage stability from the date of manufacture	Months	6	G180

All POLYLITE® products are Quality Controlled with the specified peroxide. However, alternatives are available and all users should be aware that a single catalyst formulation cannot provide optimum results in all resin systems. The interaction between the catalyst and the inhibitor/accelerator systems used in our products is complex and varies resin to resin. Consequently the gel and cure characteristics provided by alternate catalysts can vary greatly from these specified. It is therefore, absolutely essential that the user evaluate each alternate catalyst in each product before full-scale manufacture is started.

TYPICAL NON-REINFORCED CASTING PROPERTIES

Fully post-cured

Property	Unit	Value	Test method
Tensile strength	MPa	47	BS 2782: Part 3: Method 320C: 1976
Tensile elongation	%	2.2	BS 2782: Part 3: Method 320C: 1976
Flexural strength	MPa	90	BS 2782: Part 3: Method 335A: 1978
Flexural modulus	MPa	3700	BS 2782: Part 3: Method 335A: 1978
Volume shrinkage	%	9	BS 2782: Part 6: Method 644A: 1986
Heat distortion temperature (HDT)	°C	63	BS 2782: Part 1: Method 121A: 1991
Water absorption - 24 hours	mg	10	BS 2782: Part 4: Method 430A: 1983

Satisfactory laminates for many applications can be made from POLYLITE® resins by curing at a workshop temperature of 18-20°C. However, when optimum properties and long term performance are required, e.g. chemical resistance, the laminate should be post-cured. After demould, the laminate should be allowed to mature for 24 hours at the workshop temperature (18-20°C). a post-cure cycle should be used, this will vary from product to product depending upon the HDT of the resin. Suggested cycles can be found in our Technical Bulletin Number 1. A post-cure cycle is most effective when carried out immediately after the initial 24 hours maturing period.

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