REICHHOLD

PRODUCT BULLETIN

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POLYLITE® 32166-88

DESCRIPTION

POLYLITE® 32166-88 is an unsaturated polyester casting resin developed to produce non-gel coated, solid surface products. Because POLYLITE® 32166-88 is based on isophthalic acid and neopentyl glycol, it behaves like a high-quality gel coat and will not discolor after continuous exposure to water.
POLYLITE® 32166-88 is a pre-accelerated, rigid, medium reactive and medium viscosity resin.
POLYLITE® 32166-88 is UV stabilized, stain resistant and contains methyl methacrylate.

APPLICATION

- Room temperature curing of Solid surface.
  The use of vacuum is strongly recommended in the manufacture of densified, solid surface products.

FEATURES	BENEFITS
• Acrylic-Modified	• Look, feel and smell of cast acrylic
• Based on isophthalic acid and neopentyl glycol	• Only slight bleaching after continuous exposure to water • Good stain resistance • High heat distortion temperature • Superior thermal shock performance
• Medium viscosity	• Permits high filler levels, reducing cost
• Specially promoted	• Medium gel time • Light colour • Controlled gel and cure drift

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TYPICAL PROPERTIES

PHYSICAL DATA IN LIQUID STATE AT 25°C

Properties	Unit	Value	Test Method
Viscosity - Brookfield LV SP/3/60 rpm	cps	800-1000	ASTM D 2196-86
Styrene Content	%	33-36	B070
Density	g/cm³	1.10	ISO 2811 - 2001
Flash Point	°C	31.5	ASTM D 3278 - 95
Colour		pinkish	Visual
Geltime: 1.25% NORPOL PEROXIDE 10	minutes	20-25	G020
Time from 25°C to peak exotherm	minutes	40-50	
Peak Temperature	°C	150-170	
Stability at 20°C from data of manufacture, minimum	months	3	G180

TYPICAL NON-REINFORCED CASTING PROPERTIES

Fully post-cured

Properties	Unit	Value	Test method
Tensile strength	MPa	65	ISO 527-1993
Tensile modulus	MPa	3640	ISO 527-1993
Tensile elongation	%	2,3	ISO 527-1993
Flexural strength	MPa	140	ISO 178-2001
Flexural modulus	MPa	3640	ISO 178-2001
Impact strength, P 4 J	mJ/mm²	8	ISO 179-1993
Heat distortion temp.	°C	72	ISO 75-1993
Hardness Barcol	934-1	40-45	ASTM D 2583-99

MECHANICAL DATA OF FILLED CASTING

Properties	Unit	Value	Test Method
Barcol Hardness, 934-1	-	56	ASTM D-2583-99
Tensile Strength	MPa	34.5	ISO 527 – 1993
Tensile Modulus	GPa	9	ISO 527 – 1993
Tensile Elongation at Break	%	0,5	ISO 527 – 1993
Water Absorption after 24 hours	%	0.03	ISO 62 - 1980

RECOMMENDED PEROXIDE:

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

Through thorough laboratory work we have found that some types of Peroxide formulation (such as the acetyl acetones) can lead to distinct cured colour variation. We would, therefore, strongly recommend the use of a single peroxide (NORPOL PEROXIDE 10 or Peroxide 1) especially where consistent light colours are required for the finished articles.

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