PRODUCT BULLETIN

May 2025

POLYLITE® 31602-00

Orthophthalic Molding Resin

DESCRIPTION

POLYLITE® 31602-00 is a low viscosity, medium-high reactivity, non-promoted, rigid orthophthalic, unsaturated polyester resin molding resin dissolved in styrene. POLYLITE® 31602-00 is designed to be formulated for use in SMC, BMC and TMC applications.

BENEFITS & FEATURES

- Batch-to-batch consistency and uniformity from production utilizing Statistical Process Control (S.P.C) & Statistical Quality Control (S.Q.C) techniques
- Fast wet-out and good flow allows for formulation flexibility for high-glass and high-filler content due to lower viscosity
- Good balance of physical properties, compatible with several low profile additives, and good dimensional stability when used in conjunction with low profile additives due to medium-high reactivity
- Pigmentable for non-appearance applications

PROPERTIES – LIQUID

Property(1)	Unit	31602-00
SPI NVM	%	62.0
Acid Value	mg KOH/g	22.0
Viscosity(2)	cps	675
SPI Gel Time(3)	minutes	18.5
SPI Cure	minutes	2.5
SPI Peak Exotherm	°C/°F	220/428
Specific Gravity	g/cm^3	1.114

1) All properties at 25°C/77°F unless otherwise noted. SPI testing performed in water bath at 82.2 °C
2) Brookfield Viscometer RVF Spindle #2 at 20 RPM
3) With 1.0 g of Arkema Luperox® BPO crystals per 100 g resin

PROPERTIES – PHYSICAL

Property[1]	Unit	Neat Resin Casting[2]	Test Method
Tensile Strength	psi	8,000	ASTM D 638
Tensile Modulus	psi	620,000	ASTM D 638
Tensile Elongation	%	1.5	ASTM D 638
Flexure Strength	psi	15,000	ASTM D 790
Flexure Modulus	psi	570,000	ASTM D 790
Heat Deflection Temperature	°C/°F	137/278	ASTM D 648
Hardness, Barcol Model 934-1	HB	55	ASTM D 2583
Water Absorption - 24 hours at 73°F	% gain	0.51	ASTM D 570

1) Physical properties were determined using internal Polynt test methods that are similar to those listed above.
2) Initiator type and ratio: 1.0 g of Arkema Luperox® BPO crystals + 1.0 g of styrene per 100 g of resin; Cure conditions: 16 hrs. @ 130°F; Post-cure conditions: 2 hrs. @ 180°F, 2 hrs. @ 250°F

APPLICATION

Refer to Polynt's Composites Applications Guide ("Cookbook") for equipment and application recommendations. Each user must determine the suitability of this product to his/her particular mode of operation and intended end-use application. A Polynt representative will be available to assist in the proper selection of all Polynt products available for commercial use.

SHELF LIFE & STORAGE

The shelf life of POLYLITE® 31602-00 resins is 180 days from the date of manufacture from Polynt. To maximize usage life and maintain optimum properties, resins and gel coats should be stored in the original closed container at temperatures below 23°C/73°F and away from ignition sources and sunlight. Keep containers sealed to prevent moisture pick-up and monomer loss.

SAFETY & WARRANTY

To receive a copy of our safety and warranty information, please email safetyandwarranty@polynt.com.