PRODUCT BULLETIN

July 2021

POLYLITE® 31516 Series

Medium-High Reactivity Pultrusion & Wet Molding Resins

DESCRIPTION

POLYLITE® 31516-00 is a medium reactivity terephthalic polyester resin designed for pultrusion and wet molding operations. This resin is formulated for applications where high gloss and toughness are desired. This resin system produces composites with excellent surface finish, good corrosion resistance, and excellent mechanical properties.

POLYLITE® 31516-20 is a more reactive version of the POLYLITE® 31516-00 resin.

BENEFITS & FEATURES

- Batch-to-batch consistency and uniformity from production utilizing Statistical Process Control (S.P.C) & Statistical Quality Control (S.Q.C) techniques
- Excellent resistance to impact cracking, high flexural strength and suitable for pultruding complex shapes due to high strength and toughness
- Uniform glass fiber and filler wet-out characteristics due to low viscosity
- Fast line speeds and high gloss from medium-high reactivity

PROPERTIES – LIQUID

Property(1)	Unit	31516-00	31516-20
NVM	%	70	69
Viscosity (2)	cps	800	800
Thix Index	-	NA	-
SPI Gel Time(3)	minutes	5.5	4.1
SPI Cure	minutes	2.25	1.75
SPI Peak Exotherm	°C/°F	220/428	222/432
Specific Gravity	-	1.12	1.12

1) All properties at 25°C/77°F unless otherwise noted
2) Brookfield Viscometer RV Spindle #2 at 20 RPM
3) 1.0% BPO crystals

PROPERTIES – PHYSICAL

Property[1]	Unit	Neat Resin Casting[2]	Test Method
Tensile Strength	psi	11,000	ASTM D 638
Tensile Modulus	psi	4,500	ASTM D 638
Tensile Elongation	%	4.85	ASTM D 638
Flexure Strength	psi	19,000	ASTM D 790
Flexure Modulus	psi	4,675	ASTM D 790
Heat Deflection Temperature	°C/°F	94/201	ASTM D 648

1) Physical properties were determined using internal Polynt test methods that are similar to those listed above.
2) Initiator type and ratio: 1.0% Luperox® A98; 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-Reichhold products available for commercial use.

SHELF LIFE & STORAGE

The shelf life of POLYLITE® 31516-00 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.