PRODUCT BULLETIN

January 2021

POLYLITE® 31515 Series

Class-A Infusion and RTM Resins

DESCRIPTION

POLYLITE® 31515 is a series of unique one-component Class-A modified polyester resins formulated specifically for liquid composite RTM or Vacuum Infusion type processes. POLYLITE® 31515 resins are available in promoted and non-promoted versions and are ideally suited for use in highly visible molded parts for applications with critical requirements for Class-A surface quality and dimensional stability. POLYLITE® 31515 resins are typically used with gel coat on at least one surface.

BENEFITS & FEATURES

- Batch-to-batch consistency and uniformity from production utilizing Statistical Process Control (S.P.C) & Statistical Quality Control (S.Q.C) techniques
- Class-A surface appearance (with filler), near Class-A surface appearance (w/o filler), ease of use with only one component to use, excellent mold surface reproduction, surface quality comparable to Sheet Molding Compound or steel (with gelcoat), and excellent dimensional stability due to one component-low shrink system
- MACT compliant resin and Table 3 subpart wwww, National Emissions – Non marine MACT classified as "Shrink Controlled Resin"
- Excellent mechanical properties – similar to SMC with excellent strength
- Accepts high filler / glass loadings, excellent surface appearance, excellent cost / performance, and excellent flow and wet-out due to low viscosity
- Short de-mold time for fast cycle times and improved through-put due to fast Barcol hardness development

PROPERTIES – LIQUID

Property[1]	Unit	31515-05[3]	31515-07[3]	31515-08[4]	31515-10[5]
Appearance	-	Amber	Amber	Amber	Amber
NVM	%	51.5	52.5	52.5	51.73
Viscosity [2]	cps	110	110	110	110
Gel Time	minutes	12.5	12.5	22	12.5
Gel to Peak	minutes	8.5	8.5	14	-
Peak Exotherm	°C/°F	209/408	209/408	140/284	-
Specific Gravity	-	-	-	-	1.065
Stability – 105 °C	°C/°F	-	-	-	2.0 (Min.)
Shrinkage	Inches	-	-	-	9.990 (Min.)
Flash Point (Seta Closed Cup)	°C/°F	32/89	32/89	32/89	-

1) All properties at 25°C/77 unless otherwise noted
2) Brookfield Viscometer LVT Spindle #1 at 30 RPM
3) 1 g MEKP-900 per 100 g of resin
4) 1 g MEKP-9 per 100 g of 40% ATH Filled resin - Sunshine gel test
5) 1.0 cc MEKP-900 per 100 g resin

PROPERTIES – PHYSICAL

Property[1]	Unit	Clear Casting	Filled[2]	Test Method
Tensile Strength	psi	4,400	15,000	ASTM D 638
Tensile Modulus	psi	2,400,000	NA	ASTM D 638
Tensile Elongation	%	2.1	1.1	ASTM D 638
Flexure Strength	psi	8,100	24,000	ASTM D 790
Flexure Modulus	psi	2,800,000	1,100,000	ASTM D 790
Heat Deflection Temperature	°C/°F	79/175	260/500	ASTM D 648
Hardness, Barcol Model 934-1	HB	35	50	ASTM D 2583
Izod Impact -Type "E" [3]	ft-lb/in	NA	19	ASTM D 256

1) Physical properties were determined using internal Polynt test methods that are similar to those listed above.
2) Test panels contained 33% fiberglass, 33% filler, and 33% resin. Panels were molded @ 140°F, and post-cured for 2 hrs. @ 250°F.

APPLICATION

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® 31515 Series resins is 120 days (promoted) or 180 (unpromoted) 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.