PRODUCT BULLETIN

January 2019

POLYLITE® 33184 Series

Low-Profile Laminating Resin

DESCRIPTION

POLYLITE® 33184 is a pre-promoted, thixotropic, low-profile, unsaturated polyester resin. POLYLITE® 33184 was developed for fabricating small to large FRP structures with high production rates at room temperature. POLYLITE® 33184 resins are suitable for use in hand lay-up and spray-up fabrication processes. In addition, the high heat distortion temperature of POLYLITE® 33184 is especially important in the transportation industry where print-through and rib trace must be eliminated. POLYLITE® 33184 resins are formulated for curing at room temperature with a methyl ethyl ketone peroxide (MEKP) initiator.

POLYLITE® 33184-51 and POLYLITE® 33184-61 are wax containing versions of POLYLITE® 33184-50 and POLYLITE® 33184-60 respectively.

BENEFITS & FEATURES

- Batch-to-batch consistency and uniformity from production utilizing Statistical Process Control (S.P.C) & Statistical Quality Control (S.Q.C) techniques
- Rapid wet-out of reinforcements results in improved turnover and fabrication time, minimal voids and/or resin-starved areas, and desired resin-to-glass ratio
- Minimal print-through of reinforcements and low tendency for post-cure due to low profile
- Versatile and suitable for hand lay-up and spray-up
- Consistent gel and cure times at various catalyst levels
- Working time easily modified according to part size due to variable gel times
- High heat distortion temperature retains mechanical properties at elevated temperatures, and prevents rib trace and print-through

PROPERTIES – LIQUID

Property[1]	Unit	33184-50	33184-51	33184-60	33184-61
Appearance	-	Amber-Opaque	Amber-Opaque	Amber-Opaque	Amber-Opaque
NVM	%	64	64	64	64
Viscosity[2]	cps	500	500	500	500
Thix Index	-	3.30	3.30	3.30	3.30
Gel Time[3]	minutes	40	40	33	33
Gel to Peak	minutes	24.5	24.5	23	23
Peak Exotherm	°C/°F	150/302	150/302	150/302	150/302
Specific Gravity	g/cm³	1.095	1.095	1.095	1.095
Flash Point (Seta Closed Cup)	°C/°F	32/89	32/89	32/89	32/89

1) All properties at 25°C/77°F unless otherwise noted
2) Brookfield Viscometer LVF Spindle #3 at 60 RPM
3) 1.0 cc MEKP-9 per 100 g resin

PROPERTIES – PHYSICAL

Property[1]	Unit	Neat Resin Casting[2]	Test Method
Tensile Strength	psi	7,000	ASTM D 638
Tensile Modulus	psi	532,000	ASTM D 638
Tensile Elongation	%	1.45	ASTM D 638
Flexure Strength	psi	14,000	ASTM D 790
Flexure Modulus	psi	559,000	ASTM D 790
Compression Strength	psi	19,000	ASTM D 695
Heat Deflection Temperature	°C/°F	94/201	ASTM D 648
Hardness, Barcol Model 934-1	HB	40	ASTM D 2583
Water Absorption - 2 hours at 212°F - 24 hours at 73°F	 % gain % gain	 0.5645 0.1525	ASTM D 570

1) Physical properties were determined using internal Polynt test methods that are similar to those listed above.
2) 1.00% MEKP-9 cured overnight at 73 °F for 16 hrs.; post cured 2 hrs. @150 °F, and 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® 33184 Series resins is 120 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.