PRODUCT BULLETIN

March 2018

POLYLITE® 33204 Series

Low Profile, Low Styrene, Marine Laminating Resin

DESCRIPTION

POLYLITE® 33204 Series are promoted, thixotropic, low profile, low styrene, marine grade, unsaturated polyester laminating resins. POLYLITE® 33204 Series are formulated for ambient curing with methyl ethyl ketone peroxide (MEKP) initiators in marine or general purpose hand lay-up or spray-up applications where compliance with SCAQMD Rule 1162 type emission standards are desired.

BENEFITS & FEATURES

- Batch-to-batch consistency and uniformity from production utilizing Statistical Process Control (S.P.C) & Statistical Quality Control (S.Q.C) techniques
- Complies with Rule 1162 and Regulation 8: Rule 50 for Polyester Resin Operations with less than 35% VOCs (by weight)
- Quick turnover of parts and ease of handling due to rapid wetting of reinforcements and low air entrapment
- Fast Barcol development in thin cross-section laminates due to rapid rate of cure
- Resistance to draining and sagging due to thixotropic properties
- Minimal print-through of reinforcement materials and improved cosmetics due to low post-cure tendencies
- Resists impact, thermal, and demolding cracking
- Versatile and suitable for hand lay-up or spray-up applications
- Maintains mechanical properties at high temperatures due to high HDT

PROPERTIES – LIQUID

Property[1]	Unit	33204-00	33204-05	33204-06	33204-10	33204-15
Appearance	-	Blue, Opaque	Blue, Opaque	Amber, Opaque	Blue, Opaque	Blue, Opaque
Viscosity[2]	cps	475	475	475	475	475
Thix Index	-	3.75	3.75	3.75	3.75	3.75
Gel Time	minutes	46[3]	26[4]	26[4]	46[5]	35[3]
Gel to Peak	minutes	14	12	12	20	14
Peak Exotherm	°C/°F	160/320	160/320	145/293	143/289	160/320
Specific Gravity	-	1.09	1.09	1.09	1.09	1.09
Flash Point (Seta Closed Cup)	°C/°F	32/89	32/89	32/89	32/89	32/89

1) All properties at 25°C/77°F unless otherwise noted
2) Brookfield viscometer LV #3 @ 60 rpm
3) 1.5 cc of DDM-9 per 100.0 g resin
4) 1.5 g of DDM-9 per 100.0 g resin
5) 1.5 cc of MEKP-9 per 100.0 g resin

PROPERTIES – LIQUID (Continued)

Property[6]	Unit	33204-20	33204-30	33204-35	33204-50
Appearance	-	Blue, Opaque	Amber, Opaque	Amber, Opaque	Blue, Opaque
Viscosity[7]	cps	475	475	475	475
Thix Index	-	3.5	3.75	3.65	3.75
Gel Time	minutes	20[8]	33[10]	65[11]	53[9]
Gel to Peak	minutes	14	15	-	20
Peak Exotherm	°C/°F	160/320	153/307	-	143/289
Specific Gravity	-	1.09	1.09	1.09	1.09
Flash Point (Seta Closed Cup)	°C/°F	32/89	32/89	32/89	32/89

6) All properties at 25°C/77°F unless otherwise noted
7) Brookfield viscometer LV #3 @ 60 rpm
8) 1.5 g of DDM-9 per 100.0 g resin
9) 1.5 cc of MEKP-9 per 100.0 g resin
10) 1.5 cc of MEKP-925H per 100.0 g resin
11) In air with 1.5 cc of MCP-75 per 100.0 g resin

PROPERTIES – PHYSICAL

Property[1]	Unit	Neat Resin Casting[2]	Laminate[3]	Test Method
Tensile Strength	psi	7,000	19,000	ASTM D 638
Tensile Modulus	psi	460,000	1,300,000	ASTM D 638
Tensile Elongation	%	1.7	2.4	ASTM D 638
Flexure Strength	psi	12,000	39,000	ASTM D 790
Flexure Modulus	psi	510,000	1,600,000	ASTM D 790
Compression Strength	psi	16,000	25,000	ASTM D 695
Heat Deflection Temperature	°C/°F	78/172	-	ASTM D 648
Hardness, Barcol Model 934-1	HB	40	55	ASTM D 2583
Water Absorption - 2 hours at 212°F - 24 hours at 73°F	 % gain % gain	 0.91 0.13	 0.54 0.11	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: DDM-9 @ 1.5%; Cure conditions: 16 hrs. @ 73°F; Post-cure conditions: 2 hrs. @ 150°F, 2 hrs. @ 250°F
3) Laminate Construction: 4 ply 1.5 oz/sq. ft Chopped Strand Mat; Glass Content: 35%; Thickness: 0.15" nominal; Initiator type and ratio: DDM-9 @ 1.5%; Cure conditions: 16 hrs. @ 73°F; Post-cure conditions: 4 hrs. @ 150°F

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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® 33204 Series 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.