PRODUCT BULLETIN

December 2022

POLYLITE® 33283 Series

Low Profile Laminating Resins

DESCRIPTION

POLYLITE® 33283 Series resins are pre-promoted, thixotropic, low profile, low styrene, unsaturated polyester laminating resins. POLYLITE® 33283 Series resins are formulated for ambient curing with methyl ethyl ketone peroxide (MEKP) initiators for general purpose hand lay-up or spray-up applications where compliance with SCAQMD Rule 1162 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% styrene (by weight)
- Quick turnover of parts and ease of handling due to rapid wetting of reinforcements and low air entrapment
- Minimal print-through of reinforcement materials and improved cosmetics due to low post-cure tendencies
- Resistance to draining and sagging due to thixotropic properties
- Maintains mechanical properties at high temperatures due to high HDT
- Fast Barcol development in thin cross-section laminates and better cycle times due to rapid rate of cure
- Versatile and suitable for hand lay-up or spray-up applications

PROPERTIES – LIQUID

Property[1]	Unit	33283-11	33283-16	33283-18	33283-20	33283-25
Appearance	-	Amber	Amber	Amber	Blue	Amber
Styrene Content[2]	%	35 (Max)	35 (Max)	35 (Max)	35 (Max)	35 (Max)
NVM[3]	%	66	67	66	66	66
Viscosity[4]	cps	600	450	600	600	600
Thix Index	-	3.4	2.8	3.4	3.4	3.4
Gel Time	minutes	11	18[5]	20[6]	20[6]	46[6]
Gel to Peak	minutes	11	13	11	11	17
Peak Exotherm	°C/°F	140/284	148/298	140/284	140/284	123/253
Specific Gravity	g/cm^3	1.10	1.10	1.10	1.10	1.10
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) Method 18-003A for styrene content
3) Method 18-001 for Non-Volatiles content
4) Brookfield Viscometer LVF Spindle #3 at 60 RPM
5) 1.50 g of MEKP-9 per 100.0 g of resin
6) 1.25 cc of DDM-9 per 100.0 g of resin

PROPERTIES – LIQUID

Property[7]	Unit	33283-28	33283-29	33283-31	33283-35	33283-36	33283-37
Appearance	-	Amber	Amber	Amber	Amber	Amber	Amber
Styrene Content[8]	%	35.0 (Max)	35.0 (Max)	35.0 (Max)	-	-	
NVM[9]	%	66	65	66	67	67	67
Viscosity[10]	cps	600	475	600	550	550	550
Thix Index	-	3.4	3.3	3.4	3.0	3.0	3.0
Gel Time	minutes	26[11]	20[11]	33[12]	25[12]	33[12]	33[12]
Gel to Peak	minutes	18	12	22	12	13	13
Peak Exotherm	°C/°F	135/275	135/275	133/271	141/286	146/295	146/295
Specific Gravity	g/cm^3	1.10	1.10	1.10	1.11	1.11	-
Weight per Gallon	lbs/gal	-	-	-	-	-	9.23
Flash Point (Seta Closed Cup)	°C/°F	32/89	32/89	32/89	32/89	32/89	32/89

7) All properties at 25°C/77°F unless otherwise noted
8) Method 18-003A for styrene content
9) Method 18-001 for Non-Volatiles content
10) Brookfield Viscometer LVF Spindle #3 at 60 RPM
11) 1.50 cc of DDM-9 per 100.0 g of resin
12) 1.00 g of DDM-9 per 100.0 g of resin

PROPERTIES – PHYSICAL

Property[1]	Unit	Neat Resin Casting[2]	Test Method
Tensile Strength	psi	6,000	ASTM D 638
Tensile Modulus	psi	490,000	ASTM D 638
Tensile Elongation	%	1.4	ASTM D 638
Flexure Strength	psi	13,000	ASTM D 790
Flexure Modulus	psi	550,000	ASTM D 790
Compression Strength	psi	18,000	ASTM D 695
Heat Deflection Temperature	°C/°F	74/165	ASTM D 648
Hardness, Barcol Model 934-1	HB	45	ASTM D 2583
Water Absorption - 2 hours at 212°F - 24 hours at 73°F	 % gain % gain	 0.88 0.19	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 @ 1.25%; Cure conditions: 16 hrs. @ 73°F; Post-cure conditions: 2 hrs. @ 150°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® 33283 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.