PRODUCT BULLETIN

March 2025

# POLYLITE® 33038 Series

## Low Styrene Laminating Resin

## DESCRIPTION

POLYLITE® 33038 Series are promoted, thixotropic, low styrene, unsaturated polyester laminating resins. POLYLITE® 33038 Series resins are formulated for ambient curing with methyl ethyl ketone peroxide (MEKP) initiators for general purpose hand lay-up or spray-up applications.

## BENEFITS & FEATURES

- Batch-to-batch consistency and uniformity from production utilizing Statistical Process Control (S.P.C) & Statistical Quality Control (S.Q.C) techniques
- Reduced overall emissions due to less than 35% styrene
- Quick turnover of parts and ease of handling due to rapid wetting of reinforcements and low air entrapment
- Resistance to draining and sagging due to thixotropic properties
- Versatile and suitable for hand lay-up or spray-up applications

## PROPERTIES – LIQUID

| Property[1] | Unit | 33038-05 | 33038-30 | 33038-47 |
|---|---|---|---|---|
| Appearance | - | Amber | Green | Green |
| NVM | % | 62 | 60 | 60 |
| Viscosity[2] | cps | 600 | 650 | 650 |
| Thix Index | - | 2.75 | 3.5 | 3.5 |
| Gel Time | minutes | 43[3] | 41[4] | 47[4] |
| Gel to Peak | minutes | 45 | 30 | 30 |
| Peak Exotherm | °C/°F | 127/260 | 130/266 | 130/266 |
| Styrene Content | % | 33 | 35 (Max.) | 35 (Max.) |
| Weight per Gallon | lbs/gal | 9.3 | 9.4 | 9.4 |
| Flash Point (Seta Closed Cup) | °C/°F | 32/89 | 32/89 | 32/89 |

1) All properties at 25°C/77°F unless otherwise noted
2) Brookfield Viscometer LV Spindle #3 at 60 RPM
3) 1.50 g of United Initiators Norox® MEKP-9 per 100.0 g resin
4) 1.25 g of United Initiators Norox® MEKP-9H per 100.0 g resin

## PROPERTIES – PHYSICAL

| Property[1] | Unit | Neat Resin Casting[2] | Laminate[3] | Test Method |
|---|---|---|---|---|
| Tensile Strength | psi | 6,000 | 22,000 | ASTM D 638 |
| Tensile Modulus | psi | 330,000 | 1,300,000 | ASTM D 638 |
| Tensile Elongation | % | 13.9 | 2.3 | ASTM D 638 |
| Flexure Strength | psi | 9,000 | 44,000 | ASTM D 790 |
| Flexure Modulus | psi | 250,000 | 1,400,000 | ASTM D 790 |
| Compression Strength | psi | 11,000 | - | ASTM D 695 |
| Heat Deflection Temperature | °C/°F | 39/102 | - | ASTM D 648 |
| Hardness, Barcol Model 934-1 | HB | 40 | 48 | ASTM D 2583 |
| Water Absorption<br>- 2 hours at 212°F<br>- 24 hours at 73°F | <br>% gain<br>% gain | <br>1.21<br>0.27 | <br>0.78<br>0.13 | ASTM D 570 |
| Izod Impact<br>-Type "E" | ft-lb/in | 1.34 | - | ASTM D 256 |

1) Physical properties were determined using internal Polynt test methods that are similar to those listed above.
2) Initiator type and ratio: United Initiators Norox® MEKP-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: 33% Target; Thickness: 0.125" nominal; Initiator type and ratio: 1.5 cc of United Initiators Norox® MEKP-9 per 100 g of resin; 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 products available for commercial use.

## SHELF LIFE & STORAGE

The shelf life of the POLYLITE® 33038 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.