PRODUCT BULLETIN

November 2021

# POLYLITE® 33402-00

## Premium Isophthalic Polyester Resin

## DESCRIPTION

The POLYLITE® 33402-00 resin is a rigid, medium reactivity, chemical resistant, isophthalic acid based polyester resin containing wax. This thixotropic, low-viscosity resin is prepromoted for curing with the addition of methyl ethyl ketone peroxide (MEKP). Suggested applications include hand lay-up, spray-up, continuous laminating, filament winding, and centrifugal casting.

## BENEFITS & FEATURES

- Resists many organic and inorganic solutions, solvents and gases through a wide range of temperatures and concentrations due to chemical resistance
- Resists water degredation and blistering since it contains no esterification initiator
- Versatile and suitable for hand lay-up, spray-up, and filament winding
- Properly fabricated parts may be used for food contact applications since components meet FDA 177.2420 Title 21 regulation
- Approved for use in military operations since it meets MIL-R-7575C, Grade B regulation

## PROPERTIES – LIQUID

| Property(1) | Unit | 33402-00 |
|---|---|---|
| NVM | % | 52 |
| Viscosity(2) | cps | 425 |
| Thix Index | - | 2.1 |
| Gel Time(3) | minutes | 11.5 |
| Total Time to Peak | minutes | 21.5 |
| Peak Exotherm | °C/°F | 207/405 |
| Specific Gravity | $g/cm^3$ | 1.08 |
| Flash Point (Seta Closed Cup) | °C/°F | 32/89 |

1) All properties at 25°C/77°F unless otherwise noted
2) Brookfield Viscometer LVF Spindle #3 at 60 RPM
3) 1.25% MEKP-9

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## PROPERTIES – PHYSICAL

| Property[1] | Unit | Clear Casting[2] | 1/8" / 3.2 mm Laminate[3] | Test Method |
|---|---|---|---|---|
| Tensile Strength | psi | 11,000 | 12,000 | ASTM D 638 |
| Tensile Modulus | psi | 0.540 | 1.207 | ASTM D 638 |
| Tensile Elongation | % | 2.4 | 1.3 | ASTM D 638 |
| Flexure Strength | psi | 21,000 | 22,000 | ASTM D 790 |
| Flexure Modulus | psi | 0.555 | 1.087 | ASTM D 790 |
| Compression Strength | psi | 18,000 | 26,000 | ASTM D 695 |
| Compression Modulus | psi | 0.385 | 1.367 | ASTM D 695 |
| Heat Deflection Temperature | °C/°F | 103/217 | N/A | ASTM D 648 |
| Hardness, Barcol Model 934-1 | HB | 47 | 55 | ASTM D 2583 |
| Specific Gravity / Density | g/cm$^3$ | 1.18 | 1.40 | ASTM D 792 |
| Water Absorption<br>- 2 hours at 212°F<br>- 24 hours at 73°F | <br>% gain<br>% gain | <br>0.46<br>0.14 | <br>0.33<br>0.79 | ASTM D 570 |
| Weight % Glass | - | N/A | 30 | ASTM D 256 |

1) Physical properties were determined using internal Polynt test methods that are similar to those listed above.
2) Post cured
3) 3 plies of 1.5 oz/ft$^2$

## 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® 33402-00 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.