PRODUCT BULLETIN

March 2018

POLYLITE® 33420 Neat Resin Series

Isophthalic Polyester Resins

DESCRIPTION

POLYLITE® 33420 Neat Resin Series are thixotropic, medium reactivity, high viscosity, rigid, chemical-resistant, isophthalic polyester resins. They are specially formulated for use in cured-in-place pipe (CIPP) applications. POLYLITE® 33420 Neat Resin Series resins have been tested according to ASTM D2990, D5813, and F1216 by accredited, third-party testing facilities. Test results are available upon request.

BENEFITS & FEATURES

- Batch-to-batch consistency and uniformity from production utilizing Statistical Process Control (S.P.C) & Statistical Quality Control (S.Q.C) techniques
- Excellent corrosion-resistance in many environments and good physical properties due to high molecular weight and premium isophthalic base polymer
- Resists sagging on vertical surfaces and resists draining around reinforcements due to thixotropic properties
- Fast curing at moderate temperatures and excellent catalyzed stability due to special inhibitor system

PROPERTIES – LIQUID

Property(1)	Unit	33420-00	33420-01	33420-02	33420-15	33420-20
NVM	%	59	58	58	59	60
Viscosity(2)	cps	2,750	4,200	4,200	5,300	3,000
Thix Index	-	3.0	4.5	4.5	4.5	3.0
Gel Time @ 140°F	minutes	25.0(3)	25.0(3)	40.0(4)	10.0(3)	15.0(3)
Time to Peak @140°F	minutes	30.0	30.0	45.0	17.0	18.0
Peak Exotherm	°C/°F	200/392	198/388	195/388	200/393	200/393
Specific Gravity	-	1.105	1.105	1.105	1.105	1.105
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 RV Spindle #4 @ 20 RPM
3) 1.0 g of Perkadox 16 + 1.0 g of styrene + 0.5 g of Trigonox C per 100.0 g of resin; Sunshine Gel Meter, 3 inches of catalyzed resin in a 19 X 150 mm test tube
4) 1.0 g of Trigonox 121C75 + 0.5 g of Trigonox C per 100.0 g of resin; Sunshine Gel Meter, 3 inches of catalyzed resin in a 19 X 150 mm test tube

PROPERTIES – PHYSICAL

Property[1]	Unit	Neat Resin Casting	Felt Coupons	Test Method
Tensile Strength	psi	10,000	6,000	ASTM D 638
Tensile Modulus	psi	540,000	610,000	ASTM D 638
Tensile Elongation	%	2.4	1.2	ASTM D 638
Flexure Strength	psi	16,000	9,000	ASTM D 790
Flexure Modulus	psi	630,000	650,000	ASTM D 790
Heat Deflection Temperature	°C/°F	107/225	-	ASTM D 648
Hardness, Barcol Model 934-1	HB	45	40-45	ASTM D 2583
Water Absorption - 2 hours at 212°F - 24 hours at 73°F	 % gain % gain	 0.49 0.22	 - -	ASTM D 570

1) Physical properties were determined using internal Polynt test methods that are similar to those listed above.

PROPERTIES - OTHER

ASTM F-1216 Test Results[1]

Chemical Environment	Flexural Strength Retention % [2]	Flexural Modulus Retention %[2]
100% Tap Water	117.0	109.2
100% Gasoline	104.0	103.1
100% Vegetable Oil	108.4	106.7
0.1% Soap	111.2	106.3
0.1% Detergent	95.5	101.8
5% Nitric Acid	114.8	104.9
10% Sulfuric Acid	111.0	107.2
10% Phosphoric Acid	116.5	107.8

1) These results are provided through certified third party testing conducted by Cincinnati Testing Laboratories, Inc., Cincinnati, Ohio. Copies are available upon request
2) ASTM F-1216 requires retention of 80% of initial Flexural Strength and Modulus after 30 days of exposure

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® 33420 Neat Resin 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.

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SAFETY & WARRANTY

To receive a copy of our safety and warranty information, please email safetyandwarranty@polynt.com.