PRODUCT BULLETIN

April 2025

HYDREX® 100 33350 Series

100% Vinyl Ester Laminating Resin

DESCRIPTION

HYDREX® 100 33350 Series are pre-promoted, thixotropic, vinyl ester resins suitable for fabricating small to large FRP structures with high production rates at room temperature. Typical parts include fiberglass tooling, marine and spa skin coats, and/or complete laminates. HYDREX® 100 33350 Series resins are formulated for curing at room temperature with standard methyl ethyl ketone peroxide without foaming. They are suitable for either hand lay-up or spray-up.

BENEFITS & FEATURES

- Batch-to-batch consistency and uniformity from production utilizing Statistical Process Control (S.P.C) & Statistical Quality Control (S.Q.C) techniques
- Premium resin for tooling application
- Versions available for marine skin coat, bulk build and acrylic bonding
- Lower exotherm versions for thicker laminates
- Superior blister resistance due to lower water absorption rate
- Excellent resistance to impact, thermal and demolding cracks from high strength and toughness
- Faster lamination and build-up of layers due to tack free surface
- Minimized print-through for smooth surfaces due to improved profile
- Minimized voids and resin-starved areas with easy maintenance of resin-to-glass ratio due to rapid wetting-out of reinforcements
- Retention of physical properties at elevated temperatures from high heat distortion temperature
- Resistance to sagging and draining due to stable thixotropy

PROPERTIES – LIQUID

Property[1]	Unit	33350-00	33350-14	33350-15	33350-99
Appearance	-	Amber	Amber	Blue	Amber
NVM	%	55	55	55	55
Viscosity[2]	cps	525	525	525	525
Thix Index	-	3.0	3.0	3.0	3.0
Gel Time[3]	minutes	23	23	23	38
Gel to Peak	minutes	16	11	11	-
Peak Exotherm	°C/°F	177/350	177/350	177/350	-
Specific Gravity	g/cm³	1.08	1.08	1.08	1.08

1) All properties at 25°C/77°F unless otherwise noted
2) Brookfield Viscometer LVF Spindle #3 at 60 RPM
3) 1.25 cc of United Initiators Norox® MEKP-925 per 100.0 g of resin

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PROPERTIES – PHYSICAL

Property[1]	Unit	Neat Resin Casting[2]	Test Method
Tensile Strength	psi	12,000	ASTM D 638
Tensile Modulus	psi	480,000	ASTM D 638
Tensile Elongation	%	4.7	ASTM D 638
Flexure Strength	psi	22,000	ASTM D 790
Flexure Modulus	psi	530,000	ASTM D 790
Compression Strength	psi	16,000	ASTM D 695
Heat Deflection Temperature	°C/°F	101/213	ASTM D 648
Hardness, Barcol Model 934-1	HB	36	ASTM D 2583
Water Absorption - 2 hours at 212°F - 24 hours at 73°F	 % gain % gain	 0.58 0.18	ASTM D 570
Izod Impact -Type "E"	ft-lb/in	3.14	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-925 @ 2.0%; Cure conditions: 16 hrs. @77°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 HYDREX® 100 33350 Series resins 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.