PRODUCT BULLETIN

March 2018

HYDREX® ONE HF 33385 Series

Vinyl Ester Hybrid Infusion Resin

DESCRIPTION

HYDREX® ONE HF 33385 Series resins are pre-promoted, low HAPs, low viscosity, low profile vinyl ester hybrid infusion resins. HYDREX® ONE HF 33385 Series resins are formulated for ambient curing with methyl ethyl ketone peroxides (MEKP) or cumene hydroperoxides (CHP) blends in small and large marine grade and general purpose FRP structures using closed mold processes such as Infusion, RTM, RTM light, SCRIMP, and CCBM. HYDREX® ONE HF 33385-50 is a non-promoted version designed for use with Promoter Solution 46590-00.

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 emissions, and compliant with Rule 1162 and Regulation 8: Rule 50 for Polyester Resin Operations due to low HAPs
- Rapid wetting of reinforcements, ease of handling and high flow rates in closed molding processes from low viscosity
- Improved surface profile in thick laminates due to low laminate exotherm in thick sections without the need for CHP inhibitors
- Excellent blister resistance from low water absorption
- Maintains mechanical properties at high temperatures due to high heat distortion temperature
- Resists impact, thermal and demolding cracking

PROPERTIES – LIQUID

Property[1]	Unit	33385-10	33385-25	33385-50
Appearance	-	Amber	Amber	Green
Viscosity[2]	cps	108	120	148
Gel Time	minutes	43[3]	120[4]	120[5]
Gel to Peak	minutes	35	150	105
Peak Exotherm	°C/°F	140/284	85/185	190/374
Specific Gravity	-	1.07	1.07	1.07
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 LVF Spindle #2 at 12 RPM
3) 1.5 g MEKP-9 per 100.0 g of resin
4) 1.5 g MCP-75 per 100.0 g of resin
5) 0.3 g Promoter Solution 46590-00 + 1.5 g MCP-75 per 100.0 g of resin

PROPERTIES – PHYSICAL

Property[1]	Unit	Neat Resin Casting	Test Method
Tensile Strength	psi	8,000	ASTM D 638
Tensile Modulus	psi	530,000	ASTM D 638
Tensile Elongation	%	1.7	ASTM D 638
Flexure Strength	psi	16,000	ASTM D 790
Flexure Modulus	psi	560,000	ASTM D 790
Compression Strength	psi	19,000	ASTM D 695
Heat Deflection Temperature	°C/°F	103/217	ASTM D 648
Hardness, Barcol Model 934-1	HB	43	ASTM D 2583
Water Absorption - 2 hours at 212°F - 24 hours at 73°F	 % gain % gain	 0.50 0.15	ASTM D 570
Izod Impact -Type "A"	ft-lb/in	1.47	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: 1.5 g MCP-75 per 100.0 g of resin; Cure conditions: 16 hrs. @ 73° F; Post-cure conditions: 2 hrs. @ 150° F, 2 hrs. @ 250° F

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 HYDREX® ONE HF 33385 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.