PRODUCT BULLETIN

January 2020

DION® 31038-00

Urethane-Modified Vinyl Ester for Pultrusion

DESCRIPTION

DION® 31038-00 is a premium urethane-modified, vinyl-ester resin with many unique features. DION® 31038-00 has exceptional wetting characteristics with carbon and aramid, as well as conventional glass fibers. The urethane modification creates a tough, resilient polymer that combines outstanding chemical resistance and high-temperature performance with excellent laminating properties.

BENEFITS & FEATURES

- Batch-to-batch consistency and uniformity from production utilizing Statistical Process Control (S.P.C) & Statistical Quality Control (S.Q.C) techniques
- Tough, impact resistant laminates, and ideal for filament winding due to urethane-modified properties
- Improved mechanical properties due to excellent wet-out with glass, carbon, and aramid
- Capable of high filler loading due to low viscosity
- High HDT, fatigue resistance for dynamic loads, and retention of mechanical properties after heat aging due to high crosslink density

PROPERTIES – LIQUID

Property(1)	Unit	31038-00
Appearance	-	Clear
NVM	%	54
Viscosity(2)	cps	400
Acid Value	mg/g	8.0 (Max.)
SPI Gel Time(3)	minutes	15.0
SPI Cure	minutes	4.5
SPI Peak Exotherm	°C/°F	190/374
Specific Gravity	g/cm^3	1.045

1) All properties at 25°C/77°F unless otherwise noted
2) Brookfield Viscometer LVF Spindle #2 at 30 RPM
3) 0.50 g TBPO per 100.0 g of resin

PROPERTIES – PHYSICAL

Property[1]	Unit	Neat Resin Casting[2]	Test Method
Tensile Strength	psi	11,000	ASTM D 638
Tensile Modulus	psi	490,000	ASTM D 638
Tensile Elongation	%	2.9	ASTM D 638
Flexure Strength	psi	23,000	ASTM D 790
Flexure Modulus	psi	530,000	ASTM D 790
Heat Deflection Temperature	°C/°F	119/246	ASTM D 648
Hardness, Barcol Model 934-1	HB	39	ASTM D 2583

1) Physical properties were determined using internal Polynt test methods that are similar to those listed above.
2) Initiator ratio and type: 1.0 g of BPO crystals + 1.0 g of styrene per 100.0 g of resin; Cure condition: 16 hrs. @ 130°F; Post-cured conditions: 2 hrs. @ 180°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 DION® 31038-00 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.