PRODUCT BULLETIN

July 2023

DION® 9420-10

Ultra-High Crosslink Density Vinyl Ester Resin

DESCRIPTION

DION® 9420-10 is a specialty vinyl ester that features additional cross-linking sites on the polymer chain and in the monomer system. Ultra-high crosslink-density yields a resin with an exceptionally high glass transition temperature, and very good retention of physical properties at elevated temperatures.

BENEFITS & FEATURES

- Batch-to-batch consistency and uniformity from production utilizing Statistical Process Control (S.P.C) & Statistical Quality Control (S.Q.C) techniques
- Good resistance to a variety of solvents, acidic and mildly alkaline environments. Very good retention of physical properties at elevated temperatures due to highly cross-linked polymer and monomer system which results in a glass transition temperature of 187°C

PROPERTIES – LIQUID

Property(1)	Unit	9420-10
NVM	%	60.0
Viscosity(2)	cps	450
SPI Gel Time(3)	minutes	20.0
SPI Cure	minutes	2.75
SPI Peak Exotherm	°C/°F	210/410
Specific Gravity	g/cm^3	1.065
Flash Point (Seta Closed Cup)	°C/°F	32/89

1) All properties at 25°C/77°F unless otherwise noted
2) Brookfield Viscometer RV Spindle #2 at 20 RPM
3) 1.0 g of BPO crystals + 1.0 g of styrene per 100.0 g of resin

PROPERTIES – PHYSICAL

Property(1)	Unit	Neat Resin Casting(2)	Test Method
Tensile Strength	psi	9,000	ASTM D 638-02
Tensile Modulus	psi	490,000	ASTM D 638-02
Tensile Elongation	%	2.2	ASTM D 638-02
Flexure Strength	psi	18,000	ASTM D 790-02
Flexure Modulus	psi	550,000	ASTM D 790-02
Hardness, Barcol Model 934-1	HB	48	ASTM D 2583-99
Water Absorption - 24 hours at 73°F	% gain	0.23	ASTM D 570-87

1) Physical properties were determined using internal Polynt test methods that are similar to those listed above.
2) Initiator type and ratio: Lupersol A-98 @ 1.0%; Cure conditions: 16 hrs. @ 130°F; Post-cure conditions: 2 hrs. @ 180°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 DION® 9420-10 is 90 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.