PRODUCT BULLETIN

May 2020

DION® 31022 Series

Medium Reactivity Pultrusion Resin

DESCRIPTION

DION® 31022 Series resins are medium reactivity isophthalic polyester resins designed for the pultrusion process. These resins are formulated for pultruded composites greater than 1/2" in thickness. Suggested applications include structural shapes, solid tool handles, sucker rods, antennas, and electrical insulating rods and structures.

DION® 31022-09 is a version that contains added UV absorbers.

BENEFITS & FEATURES

- Batch-to-batch consistency and uniformity from production utilizing Statistical Process Control (S.P.C) & Statistical Quality Control (S.Q.C) techniques
- High heat distortion temperature, excellent chemical and water resistance, and good mechanical property retention at elevated temperatures due to high crosslink density
- Suitable for large solid cross section unidirectional reinforced parts with no internal cracking, excellent interlaminar strength in unidirectional parts, and good mechanical cycling due to formulation which provides excellent strength characteristics, especially in thick cross section profiles
- 100% compatible with PVA

PROPERTIES – LIQUID

Property(1)	Unit	31022-00	31022-09
NVM	%	56	56
Viscosity(2)	cps	500	500
SPI Gel Time(3)	minutes	5.0	5.0
SPI Cure	minutes	2.0	2.0
SPI Peak Exotherm	°C/°F	226/439	226/439
Weight per Gallon	lbs/gal	9.23	9.23
Specific Gravity	-	1.18	1.18
Flash Point (Seta Closed Cup)	°C/°F	32/89	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% BPO crystals

PROPERTIES – PHYSICAL

Property(1)	Unit	Clear Casting	Test Method
Tensile Strength	psi	11,000	ASTM D 638
Tensile Modulus	psi	485,000	ASTM D 638
Tensile Elongation	%	2.69	ASTM D 638
Flexure Strength	psi	24,000	ASTM D 790
Flexure Modulus	psi	592,000	ASTM D 790
Heat Deflection Temperature	°C/°F	120/248	ASTM D 648
Hardness, Barcol Model 934-1	Barcol Top Barcol Bottom	44 37	ASTM D 2583

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

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® 31022 Series resins is 180 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.

RELATED PRODUCTS

- DION® 31031-00 Medium-high reactivity resilient isophthalic
- DION® 31020-03 High reactivity isophthalic
- POLYLITE® 31610-00 FDA approved high reactivity isophthalic

SAFETY & WARRANTY

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