PRODUCT BULLETIN

January 2026

DION® IMPACT FR 9303-54

Brominated Epoxy Vinyl Ester Resin

DESCRIPTION

DION® IMPACT FR 9303-54 is a flame-retardant, halogenated, brominated epoxy vinyl ester resin that provides corrosion resistance in a wide variety of acidic, solvent, and oxidizing environments. DION® IMPACT FR 9303-54 is for use with MEKP and BPO initiator systems. This tough, high-strength resin can be used to produce glass-reinforced laminates with excellent impact and stress-fatigue resistance.

CERTIFICATIONS (Flamability Testing)

DION® IMPACT FR 9303-54 was tested in accordance with the procedure outlined in ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials (NFPA 255, ANSI/UL 723 and UBC 8-1) and was found to have a Flame Spread Index of 25 and a Class I rating.

BENEFITS & FEATURES

- Batch-to-batch consistency and uniformity from production utilizing Statistical Process Control (S.P.C) & Statistical Quality Control (S.Q.C) techniques
- ASTM E-84 Class I flame-spread with no synergist due to brominated epoxy vinyl ester polymer backbone
- Resistance to a wide variety of chemical environments with good high-temperature stability
- Laminates are tough, as well as crack and stress-fatigue resistant
- Fast green strength development with less stressing during cure eliminates micro-cracking and allows thicker laminations because of improved reactivity
- Low viscosity permits easier roll-out for better quality parts and improved glass fiber wet-out

PROPERTIES – LIQUID

Property(1)	Unit	FR 9303-54
Appearance	-	Clear
Non-Solids	%	57.0
Viscosity(2)	cps	480
Gel Time(3)	minutes	20.5
Gel to Peak	minutes	12.0
Peak Exotherm	°C/°F	155/311
Specific Gravity	g/cm^3	1.15
Flash Point (Seta Closed Cup)	°C/°F	32/89

1) All properties at 25°C/77°F unless otherwise noted
2) Brookfield Viscometer RVF Spindle #2 at 20 RPM
3) Initiator: 1.25 g of United Initiators Norox® MEKP-925 per 100 g of resin

PROPERTIES – PHYSICAL

Property[1]	Unit	Neat Resin Casting[2]	Test Method
Tensile Strength	psi	12,000	ASTM D 638
Tensile Modulus	psi	460,000	ASTM D 638
Tensile Elongation	%	3.64	ASTM D 638
Flexure Strength	psi	21,000	ASTM D 790
Flexure Modulus	psi	540,000	ASTM D 790
Compression Strength	psi	16,000	ASTM D 695
Heat Deflection Temperature	°C/°F	87/189	ASTM D 648
Hardness, Barcol Model 934-1	HB	31	ASTM D 2583

1) Physical properties were determined using internal Polynt test methods that are similar to those listed above.
2) Initiator type and ratio: Arkema Luperox® A-98 1% + 1% Styrene; Cure conditions: gel overnight @ 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® IMPACT FR 9303-54 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.