PRODUCT BULLETIN

November 2023

DION® 363E

Powdered Bisphenol-A Fumarate Resin

DESCRIPTION

DION® 363E is a powdered, monomer-free, bisphenol-A fumarate polyester. DION® 363E can be used as a styrene soluble or water emulsion binder for fiberglass reinforcement products.

DION® 363E is widely used as a binder for chopped strand mat where good transparency or compatibility is desired for various reinforced plastics. Upon dissolution in styrene it will co-react with polyester laminating resins. The chemical structure of DION® 363E affords excellent corrosion resistance and the mat products are universally suitable for premium as well as general purpose resin applications.

BENEFITS & FEATURES

- Batch-to-batch consistency and uniformity from production utilizing Statistical Process Control (S.P.C) & Statistical Quality Control (S.Q.C) techniques
- Ethoxylated bisphenol-A fumarate without crosslinking monomer or solvents provides high tensile properties for chopped strand mat
- Emulsifiable in water. Mat products universally suitable for both premium corrosion resistance as well as general purpose applications
- When uncrosslinked, behaves as an amorphous low melting point thermoplastic before cure. Welds together adjacent glass filaments without wicking or icing associated with solvent or water-based binder systems, minimizing binder usage to achieve necessary mat tensile strength
- High molecular weight with good solubility in styrene and most organic solvents that provides good workability, appearance, and air release properties for FRP laminates fabrication
- High molecular weight, coupled with melting and rheological properties, permits production of thermoformable mat with good properties. Laminates made from sytrenated versions feature excellent corrosion resistance

PROPERTIES – LIQUID

Property[1]	Unit	363E
Acid Number	-	22 (Max.)
Ring and Ball Softening Point	°C/°F	116/241 (Min.)
Mesh Size Screen-retained	% on U.S. #35 % thru U.S. #100 % thru U.S. #200	0.5 (Max.) 30.0 (Max.) 10.0 (Max.)
Average particle size	microns	230
Viscosity[2]	poise	75
Bulk Density	lb/ft^3	35
Melt Index[3]	g/10 min	@ 105°C – 4-6 @ 115°C – 10-15 @ 125°C – 25-35
Tg, by DSC, midpoint	10°C/min ramp, °C	-first heat 55 -second heat 50
Melt Viscosity	poise @ 160°C poise @ 200°C	400 60

1) All properties at 25°C/77°F unless otherwise noted
2) Viscosity in 50% styrene
3) 2,160 g

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® 363E is 48 months 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.