

# Aquivion® D83-24B

## perfluorosulfonic acid

Aquivion® D83-24B is a perfluorosulfonic acid (PFSA) ionomer dispersion that exhibits an Equivalent Weight (EW) of 830 g/eq. Polymer concentration is 24%. Solvent system is >99% water and is free of ethers.

Aquivion® PFSA dispersions are based on the unique Short Side Chain copolymer of Tetrafluoroethylene (TFE) and Sulfonyl Fluoride Vinyl Ether (SFVE)  $F_2C=CF-O-CF_2CF_2-SO_2F$  produced by Solvay. The PFSA ionomer dispersions contain its acid form (-SO<sub>3</sub>H) and are

available in various solvent systems, EWs and concentrations.

These dispersions can be used to produce PEM fuel cell electrodes and electrochemical cell electrodes, to manufacture or repair ion exchange membranes, to produce super-acid catalysts, and for the surface treatment of PTFE membranes to improve wetting behavior.

Please visit [Aquivion.com](http://Aquivion.com) for more information.

### General

Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • North America

Physical	Typical Value Unit	Test method
Density (25°C)	1.15 g/cm <sup>3</sup>	ASTM D1475
Equivalent Weight (EW) <sup>1</sup>	810 to 850 g/eq	Internal Method
HSE/Transport Classification	Corrosive	
Polymer Concentration	24 %	TGA
Solvent Water Content	> 99 %	
Total Acid Capacity	1.17 to 1.23 meq/g	Internal Method
Viscosity (25°C)	5 to 15 mPa·s	ASTM D2196

### Flammability

Flammability	Typical Value Unit
Flammability - at ambient conditions	No

### Additional Information

#### HEALTH, SAFETY AND ENVIRONMENT

- Aquivion® PFSA dispersions are not harmful if used and handled according to standard processing procedures (see for example the "Guide to the Safe Handling of Fluoropolymer Resins" issued by the Society of the Plastics Industry). If handled inappropriately (e.g. overheating above 260°C (500°F) for extended period of time) the dispersions may release harmful toxic chemicals. By their chemical properties Aquivion® PFSA dispersion grades are classified as hazardous material subject to transportation regulations (ADR, IATA, IMDG). D83-06A is flammable whereas D83-24B and D79-20BS are corrosive (R-SO<sub>3</sub>H being a strong acid, measured pH < 2). Please refer to corresponding Material Safety Data Sheets for more information on handling and safety.

#### PACKAGING, SHIPMENT AND STORAGE

- Aquivion® PFSA D83-06A and D83-24B are available in 0.5, 5 and 60 liter containers (D79-20BS: 0.25 liter). It is recommended to store the product at 25 °C (77 °F) in a clean temperature-controlled and well ventilated environment, protected from direct sunlight and other sources of heat or irradiation. Containers should be kept tightly closed to avoid solvent evaporation. D83-06A shall be kept away from sparks, flames or other possible source of ignition.

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## Notes

Typical properties: these are not to be construed as specifications.

<sup>1</sup> eq = mol SO<sub>3</sub>H