

# Aquivion® D79-25BS

## perfluorosulfonic acid

Aquivion® D79-25BS is a chemically-stabilized (denoted by S-suffix) perfluorosulfonic acid (PFSA) ionomer dispersion that exhibits an Equivalent Weight (EW) of 790 g/eq. Polymer concentration is 25%. 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) F2C=CF-O-CF2CF2-SO2F produced by Solvay. The PFSA ionomer dispersions contain its acid form (-SO3H) 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
Appearance	• Off-White
Forms	• Liquid

### Physical

	Typical Value	Unit	Test method
Density (20°C)	1.15	g/cm <sup>3</sup>	ASTM D1475
Equivalent Weight (EW) <sup>1</sup>	790± 20	g/eq	Internal Method
HSE/Transport Classification	Corrosive		
Polymer Concentration - nominal	25	%	TGA
Solvent System - (% w/w)	99 % Water, free of ethers.		
Total Acid Capacity	1.23 to 1.30	meq/g	Internal Method
Viscosity (25°C)	< 25	mPa·s	ASTM D2196

### 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). Specifically D79-25BS is corrosive (R-SO3H 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 D79-25BS is available in 0.25, 0.5 and 60 liter containers. 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.

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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

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