

Aquivion® D72-25BS perfluorosulfonic acid

Aquivion® D72-25BS is a perfluorosulfonic acid ionomer dispersion that exhibits an Equivalent Weight (EW) of 720 g/eq. Polymer concentration is 25 %w/w. Solvent system is >99 %w/w water and is free of ethers.

Aquivion® 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 Syensqo. The ionomer dispersions contain its acid form (-SO3H) and are available in various EWs. Aquivion

dispersions can be used by the customer to manufacture dispersions based on a variety of solvent blends.

These dispersions are suitable for electrode binder applications of electrochemical devices including fuel cells, electrolyzers and potentially Power to X electrochemical devices. Aquivion dispersions can also be used for the productions of membranes, supported or not by ePTFE or woven reinforcements.

Please visit Syensqo.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 ³	ASTM D1475
Equivalent Weight (EW) ¹	720	g/eq	Internal Method
HSE/Transport Classification	Corrosive		
Polymer Concentration	25 %w/w		
Solvent System	99 %w/w, free of ethers		
Total Acid Capacity	1.39	meq/g	Internal Method
Viscosity (25°C)	< 25	mPa·s	ASTM D2196

Flammability	Typical Value	Unit
Flammability - at ambient conditions	Non flammable	



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Additional Information

HEALTH, SAFETY AND ENVIRONMENT

- Aquivion® 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 improperly (e.g. overheating above 260°C (500°F) for an extended period of time, the dispersions may release harmful toxic chemicals. By their chemical properties Aquivion® dispersion grades are classified as hazardous materials subject to transportation regulations (ADR, IATA, IMDG). Specifically, D72-25BS is corrosive (R-SO3H being a strong acid, measured pH < 2). Please refer to corresponding Material Safety Data Sheets (SDS) for more information on handling and safety.

PACKAGING, SHIPMENT AND STORAGE

- Aquivion® D72-25BS is available in 5 and 69 kg or 5 and 60 liter containers. It is recommended to store the product at 5 - 50°C 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.

Handling of Aquivion Dispersions

- It is good practice to gently stir the dispersion in its original container before use to ensure the uniform distribution of its components.

In case of foam generation due to vigorous agitation, it is needed to wait for some hours for foam to disappear.

Notes

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

¹ eq = mol SO₃H

