Aquivion® P87S-SO2F

Perfluorosulfonyl Fluoride

Solvay Specialty Polymers

Message:

Aquivion® P87S-SO2F are chemically-stabilized (denoted by the S-suffix) perfluorinated pellets in the sulfonyl fluoride (-SO2F) form that exhibit an Equivalent Weight (EW) of 870 g/eq. This material is 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.
Aquivion® P87S-SO2F resin can be easily melt extruded into a variety of shapes. The extruder should be equipped with a standard three-zone metering screw devoid of barrier or mixing elements. Optimum temperature settings will depend on the configuration of the equipment, but generally range from 200 to 300°C.
Optionally, functional groups in the molded part are then hydrolyzed in baths or wet benches with a heated base (NaOH, KOH etc) reaction which may take minutes or hours, depending on thickness and conditions.
Aquivion® P87S-SO2F can be directly hydrolyzed as described, either completely or only on their outer surface. This will enable functional activity of the sulfonic acid / sulfonyl salt groups for ion-exchange operations or as an acid catalyst.
Like other fluoropolymers, Aquivion PFSA pellets are corrosive in the melt; therefore, all parts having prolonged contact with the melt should be made with corrosion-resistant materials such as Hastelloy®, Inconel®, Monel® or Xaloy®. Chrome or nickel plating is not recommended since they are typically only sufficient for brief processing tests.

General Information			
Appearance	Translucent		
Forms	Particle		
Physical	**Nominal Value**	**Unit**	**Test Method**
Melt Mass-Flow Rate (MFR) [1]			ASTM D1238
270°C/2.16 kg	5.0 - 20	g/10 min	ASTM D1238
280°C/5.0 kg	15 - 50	g/10 min	ASTM D1238
Equivalent (EW) [2]	840 - 900	g/eq	Internal method
Density	2.080	g/cm³	ASTM D792
Heat of crystallization	230 - 250	°C	ASTM D3418
Heat of Fusion	8 - 10	°C	ASTM D3418
Drying Time	20.0	hr	
Thermal Resistance [3]	350	°C	TGA
Drying temperature-in vacuum oven	105	°C	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Melting Temperature	230 - 250	°C	ASTM D3418
Additional Information	**Nominal Value**	**Unit**	**Test Method**

HEALTH, SAFETY AND ENVIRONMENT
Aquivion® pellets 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, membranes may release harmful toxic chemicals. Please refer to corresponding Material Safety Data Sheets for more information on handling and safety.
PACKAGING, SHIPMENT AND STORAGE
Aquivion® pellets are delivered in standard polypropylene bottles and drums. Products should be kept closed in their original packaging.

NOTE	
1.	Nominal value
2.	eq = mol SO3H
3.	In air, ramped 10°C/min

Recommended distributors for this material

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