

3M Advanced Materials Division

3M™ Dyneon™ Fluoroplastic PVDF 11008/0003

Features and Benefits

- PVDF 11008/0003 is a copolymer of VF₂ and HFP (hexafluoropropylene)
- Improved flexibility over PVDF homopolymers
- Very low smoke and low flame generation
- Ideal for applications where high strength and a moderate degree of flexibility are required
- Ideal for high speed extrusion
- Excellent weatherability
- Good chemical resistance
- Long term use temperatures up to 150°C
- Processable using most conventional thermoplastic conversion techniques

Note: Data in this document are not for specification purposes.

Typical Properties

Property	Test Conditions	Test Method	Dyneon PVDF 11008/0003
Specific Gravity		ISO 1183	1.78
Melt Flow Index	230°C, 10 kg	ASTM D1238	
	230°C, 5 kg	ASTM D1238	24 g/10 min
	230°C, 2.16 kg	ASTM D1238	8 g/10 min
Tensile Strength at Break	23°C, 50 mm/min	ASTM D638	52 MPa (7,600 psi)
Elongation at Break	23°C, 50 mm/min	ASTM D638	800%
Flexural Modulus	23°C, 2 mm/min	ASTM D790	1,000 MPa (145,000 psi)
Melting Point (Crystallinity by DSC)		ASTM D3418	160°C (320°F)
UL - 94 Flammability Test		UL-94	V-O Class
Limiting Oxygen Index (LOI) (Sheet 3 mm Thick)		ASTM D2863	65%

Product Description

Polyvinylidene Fluoride (PVDF) is ideal for multiple applications across a wide array of industries. Widely used in the chemical processing, wire and cable, semiconductor, and oil and gas industries, PVDF is also gaining recognition in automotive, building, electronics, food processing, pharmaceutical and battery applications.

3M™ Dyneon™ PVDF 11008/0003 combines excellent chemical resistance, dimensional stability and excellent flame and smoke resistance with a moderate degree of flexibility. (For applications requiring high degrees of flexibility, see our 30000 series copolymers.)

PVDF 11008/0003 has set the standard for plenum rating jacketing and tubes, consistently achieving UL 150°C rating in numerous cable constructions and fiber raceway designs.

Product Features

PVDF 11008/0003 has excellent chemical resistance to most aggressive substances and solvents. As with PVDF products, PVDF 11008/0003 has outstanding mechanical strength and toughness, high abrasion resistance, as well as exceptional aging resistance, resistance to UV and nuclear radiation, and low permeability to most gases and liquids. Additionally,

PVDF 11008/0003 can be processed via most standard melt extrusion techniques, producing smooth, anti-fouling surfaces, and is ideal for high speed extrusion. PVDF 11008/0003 possesses excellent low flame and low smoke properties and is capable of operating in temperatures up to 150°C.

Storage and Material Handling

PVDF 11008/0003 should be stored in a clean, dry, uncontaminated place with packaging intact. Dyneon PVDF generally does not require drying before processing unless

high humidity conditions create surface moisture adsorption. Opened containers should be tightly resealed to prevent dust contamination from static charge accumulation and moisture ingress. The shelf life of this product has not been determined. If the user has any question about whether significant property change(s) have occurred due to an extended storage period, please contact 3M.

Safety/Toxicology

This is a fluoroplastic material so normal precautions observed with

fluoroplastics should be followed. Before processing this product, read the product label and Safety Data Sheet. Follow all precautions and directions for use. General handling/processing precautions include: (1) Process only in well ventilated areas, (2) do not smoke in areas contaminated with powder/residue from these products; (3) avoid eye contact; (4) after handling these products wash any contacted skin with soap and water.

Please visit 3M.com/fluoropolymers for additional regional contact information.

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3M Advanced Materials Division

3M Center
St. Paul, MN 55144 USA

Phone 1-800-367-8499
Web www.3M.com/fluoropolymers

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