

3M Advanced Materials Division

3M™ Dyneon™ Fluoroplastics PVDF 11008/0001

Features and Benefits

- PVDF 11008/0001 is a copolymer of VF₂ and HFP (hexafluoropropylene)
- Improved flexibility over PVDF homopolymers
- 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 (302°F)
- 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 11008/0001 |
|----------------------------------|-----------------|--------------|-------------------------|
| Form: Pellet | | | |
| Specific Gravity | | ISO 1183 | 1.78 |
| | 230°C, 10 kg | ASTM D1238 | – |
| Melt Flow Index | 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 | 47 MPa (6,815 psi) |
| Elongation at Break | 23°C, 50 mm/min | ASTM D638 | 600% |
| Flexural Modulus | 23°C, 2 mm/min | ASTM D790 | 1,000 MPa (145,000 psi) |
| Melting Point | | ASTM D3418 | 160°C (320°F) |
| Brittleness Temperature | | ASTM D 746 A | -17°C (1.4°F) |

Note: Tensile and Elongation properties were measured on ASTM D638 Type C dogbones diecut from an extruded strip.

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 11008/0001 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 11008/0001

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 11008/0001 has excellent chemical resistance to most aggressive substances and solvents. As with all 3M PVDF products, PVDF 11008/0001 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 11008/0001 can be processed

via most standard melt extrusion techniques, producing smooth, anti-fouling surfaces, and is ideal for high speed extrusion.

PVDF 11008/0001 possesses excellent low flame and low smoke properties and is capable of operating in temperatures up to 150°C (302°F).

Storage and Material Handling

PVDF 11008/0001 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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