

3M Advanced Materials Division

3M™ Dyneon™ Fluoroplastic PVDF 6012/0000

Features and Benefits

- Excellent chemical resistance to wide variety of aggressive fluids and solvents
- Good permeation resistance
- Excellent strength and dimensional stability
- Extrusion or compression molding grade

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

Typical Properties

Property	Test Conditions	Test Method	Dyneon PVDF 6012/0000
Specific Gravity		ISO 1183	1.78
Melt Flow Index	230°C, 5 kg	ASTM D1238	1.5 g/10 min
	230°C, 2.165 kg	ASTM D1238	0.5 g/10 min
Tensile Strength at Yield	23°C, 50 mm/min	ASTM D638	55 MPa 7975 psi
Tensile Strength at Break	23°C, 50 mm/min	ASTM D638	42 MPa 6090 psi
Elongation at Yield	23°C, 50 mm/min	ASTM D638	7%
Elongation at Break	23°C, 50 mm/min	ASTM D638	35%
Flexural Modulus	23°C, 2 mm/min	ASTM D790	2100 MPa
			340,500 psi
Melting Point (Crystallinity by DSC)		ASTM D3418	173°C (343°F)
Deflection Temperature (4 mm Thick)	Load 0.46 MPa, after annealing	ASTM D648	148°C (226°F)
Limiting Oxygen Index (LOI) (Sheet 3 mm Thick)		ASTM D2863	44%
UL - 94 Flammability Test	UL - 94 V-O Class	—	—

Product Description

3M™ Dyneon™ Fluoroplastic PVDF 6012/0000 is ideal for multiple applications across a wide array of industries. Widely used in the chemical process industry, wire and cable industry, semiconductor industry, and oil and gas industry, PVDF is also gaining recognition in automotive, building, electronics, pharmaceutical and battery applications.

Dyneon PVDF 6012/0000 is a high molecular weight homopolymer, suitable for extrusion or compression molding into pipes, tubes, sheets, and slabs. PVDF is inherently pure and chemically resistant to a wide array of aggressive media. This grade exhibits excellent thermal and dimensional stability, high strength, and maintains its mechanical properties at elevated temperatures.

Storage and Material Handling

3M™ Dyneon™ Fluoroplastic PVDF 6012/0000 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 Safety Data Sheet and label. Follow all directions and handling precautions. 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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