

3M Advanced Materials Division

3M™ Dyneon™ Fluoroplastics PVDF 6108/0001

Features and Benefits

- High temperature capability
- Excellent chemical resistance to a variety of aggressive fluids and solvents
- Good permeation resistance
- Smooth, anti-fouling surfaces
- Injection molding grade
- Low shrinkage rates
- Excellent strength and dimensional stability
- Good color stability

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

Typical Properties

| Property | Test Conditions | Test Method | Dyneon PVDF 6108/0001 |
|--|--------------------------------|-------------|-----------------------|
| Specific Gravity | | ISO 1183 | 1.78 |
| 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 Yield | 23°C, 50 mm/min | ASTM D638 | 50 MPa 7200 psi |
| Tensile Strength at Break | 23°C, 50 mm/min | ASTM D638 | 40 MPa 5800 psi |
| Elongation at Yield | 23°C, 50 mm/min | ASTM D638 | 8% |
| Elongation at Break | 23°C, 50 mm/min | ASTM D638 | 35% |
| Flexural Modulus | 23°C, 2 mm/min | ASTM D790 | 1930 MPa |
| | | | 280,000 psi |
| Melting Point (Crystallinity by DSC) | | ASTM D3418 | 169°C (336°F) |
| Deflection Temperature (4 mm Thick) | Load 1.82 MPa, after annealing | ASTM D648 | 112°C (234°F) |
| Molding Shrinkage | | | 2% |
| Limiting Oxygen Index (Sheet 3 mm Thick) | | ASTM D2863 | 44% |

Product Description

Polyvinylidene Fluoride (PVDF) 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, food processing, pharmaceutical and batteries.

3M™ Dyneon™ PVDF 6108/0001 is easily processed under a variety of conventional thermoplastic

conversion techniques, being particularly suitable for injection molding. This grade is designed for parts that require shrinkage rates of 2-3%. PVDF 6108/0001 is inherently pure and chemically resistant against a variety of aggressive fluids and solvents. PVDF 6108/0001 exhibits excellent dimensional stability, abrasion resistance and high strength, and maintains its mechanical properties.

Storage and Material Handling

PVDF 6108/0001 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 Material Safety Data Sheet and labels. 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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98-0504-1503-7 Rev. B