Product Data Sheet

Commercial Product

3M™ Dyneon™

Fluoroplastic PVDF 110080001

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.

PVDF 110080001 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.)

Special Features

- Copolymer of vinylidene fluoride (VF_2) and hexafluoropropylene (HFP)
- 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
- Processable using most conventional thermoplastic conversion techniques

Properties	Test method	Unit	Value
Density	ISO 1183	g/cm³	1.78
H_2O Absorption	ISO 62 (Method 1, 24 hr @ 23 °C)	%	< 0.04
Melt Flow Index	ASTM D1238 (230 °C, 10 kg)	g/10 min	-
	ASTM D1238 (230 °C, 5 kg)	g/10 min	24
	ASTM D1238 (230 °C, 2.16 kg)	g/10 min	8
Tensile Strength at Break	ASTM D638 (23 °C, 50 mm/min)	MPa	47
Elongation at Break	ASTM D638 (23 °C, 50 mm/min)	%	600
Flexural Modulus	ASTM D790 (23 °C, 2 mm/min)	MPa	1,000
Melting Point	ASTM D3418	°C	160

Product Data Sheet

Commercial Product

3M™ Dyneon™
Fluoroplastic PVDF 110080001

Typical Properties

PVDF 110080001 has excellent chemical resistance to most aggressive substances and solvents. As with all 3M PVDF products, PVDF 110080001 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. PVDF 110080001 possesses excellent low flame and low smoke properties and is capable of operating in temperatures up to 150°C.

Typical Applications

PVDF 110080001 has set the standard for plenum rating jacketing and tubes, consistently achieving UL 150°C rating in numerous cable constructions and fibre raceway designs.

Processing Recommendations

PVDF 110080001 can be processed via most standard melt extrusion techniques, producing smooth, anti-fouling surfaces, and is ideal for high speed extrusion.

Storage and Handling

PVDF 110080001 has a shelf life of three years provided it is stored in a clean, dry place in the original unopened container received from 3M. PVDF 110080001 is hydrophobic, and generally does not require drying before processing unless high humidity conditions create surface moisture adsorption.

Safety Instructions

Follow the normal precautions observed with all fluoropolymer materials.

Please consult the Material Safety Data Sheet and Product Label for information regarding the safe handling of the material. By following all precautions and safety measures, processing these products poses no known health risks. 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) If skin comes into contact with these products during handling, wash with soap and water afterwards. 5) Avoid contact with hot fluoropolymer.

Potential hazards, including release of toxic vapours, can arise if processing occurs under excessively high temperature conditions. Vapour extractor units should be installed above processing equipment. When cleaning processing equipment, do not burn off any of this product with a naked flame or in a furnace.

Delivery Form

3M™ Dyneon™ Fluoroplastic PVDF 110080001 is delivered in granular form.

Packaging size is:

- 25 kg cardboard box, 1050 kg per pallet

Product Data Sheet

Commercial Product

3M™ Dyneon™
Fluoroplastic PVDF 110080001

Important Notice

All information set forth herein is based on our present state of knowledge and is intended to provide general notes regarding products and their uses. It should not therefore be construed as a guarantee of specific properties of the products described or their suitability for a particular application. Because conditions of product use are outside Dyneon's control and vary widely, user must evaluate and determine whether a Dyneon product will be suitable for user's intended application before using it.

The quality of our products is warranted under our General Terms and Conditions of Sale as now are or hereafter may be in force.
Technical information, test data, and advice provided by Dyneon personnel are based on information and tests we believe are reliable and are intended for persons with knowledge and technical skills sufficient to analyze test types and conditions, and to handle and use raw polymers and related compounding ingredients.

No license under any Dyneon or third party intellectual rights is granted or implied by virtue of this information.
General recommendations on health and safety in processing, on work hygiene and on measures to be taken in the event of accident are detailed in our material safety data sheets.

You will find further notes on the safe handling of fluoropolymers in the brochure "Guide for the safe handling of Fluoropolymers Resins" (download link) by PlasticsEurope, Box 3, B-1160 Brussels, Tel. +32 (2) 676 17 32.

You can also download it with your smartphone using the QR code below.

Customer Service

Europe
Phone: 00 800 396 366 27
Fax: 00 800 396 366 39
Italy
Phone: 800 7 910 18
Fax: 800 7 810 19
USA
Phone : +1 800 810 8499
Fax : +1 800 635 8061

Technical Service Fluoroplastics

Dyneon GmbH
3M Advanced Materials Division
Industrieparkstraße 1
84508 Burgkirchen
Germany
Phone: +49 8679 7 4709
Fax : +49 8679 7 5037

Technical Service Fluoroelastomers & Polymer Processing Additives

3M Belgium BVBA / SPRL
3M Advanced Materials Division
Canadastraat 11
Haven 1005
2070 Zwijndrecht
Belgium
Phone: +32 3 250 7868
Fax: +32 3 250 7905

Technical Service PTFE Compounds

Dyneon B.V.
3M Advanced Materials Division
Tunnelweg 95
6468 EJ Kerkrade
The Netherlands
Phone: +31 45 567 9600
Fax: +31 45 567 9619

We will gladly supply further contact details for our full network of global sales offices. Alternatively, find them here.

Web Site: www.dyneon.eu

Printed in Germany

Status: Apr. 2014