



EVERFLON™

PFA 430

Extreme Fluidity. Flawless Micro-Precision.

Ultra-high-flow industrial fluoropolymer engineering optimized for high-speed wire extrusion, complex injection molding, and thin-wall precision.

Ultra-High-Flow Industrial Perfluoroalkoxy (PFA) Molding & Extrusion Resin | Benchmark for High-Output Precision Applications

Overview & Core Philosophy

The Velocity of Flow. The Power of Endurance.

Where ultra-low melt viscosity meets the uncompromising thermal, electrical, and chemical resistance of fluoropolymers.

Everflon™ PFA 430 is a special-purpose industrial fluoroplastic resin supplied in pellet form, specifically engineered with an ultra-high melt flow rate (MFR of 35–45 g/10 min, typical 42 g/10 min) to maximize production speeds in demanding manufacturing environments. With a critical shear rate, it allows processors to achieve rapid extrusion line speeds and smooth mold filling in complex, thin-walled cavities without melt fracture or surface irregularities.

Unlike typical high-flow polymers that compromise physical toughness, Everflon™ PFA 430 maintains good flexural properties and stress-crack resistance while delivering the processing ease of standard thermoplastics. Operating continuously up to 260°C with universal chemical inertness, exceptional dielectric performance, and non-stick behavior, it provides a cost-effective solution for producing intricate and thin-walled industrial articles.



Key Feature Pillars

Engineered for Speed. Calibrated for Industrial Scale.

Four engineering advantages redefining productivity limits in precision fluoropolymer processing.

Ultra-Low Melt Viscosity & Intricate Mold Filling | Effortless Flow. Zero Hesitation.

Sub-headline: Optimized MFR (35~45g/10min) for thin-wall cross sections and multi-cavity tooling.

- The ultra-low melt viscosity allows Everflon™ PFA 430 to easily fill thin ribs, micro-channels, and complex multi-cavity molds under reduced injection pressures and faster cycle times. It significantly lowers residual molded-in stress, preventing part warpage and ensuring dimensional repeatability.

High Critical Shear Rate & High-Speed Wire Coating | Accelerate Output. Eliminate Melt Fracture.

Critical shear rate of 250s⁻¹ enables pinhole-free thin-wall wire insulation at maximum line speeds.

- A high critical shear rate of 250s⁻¹ enables processors to run high-speed crosshead extrusion without experiencing shark-skin surface defects or melt fracture. It enables continuous, pinhole-free insulation coatings on ultra-fine wires and micro-coaxial cables while maximizing equipment throughput.

Solder-Resistant Thermal Stability & Non-Flammability | Withstands the Heat. Survives the Solder.

Rated for continuous 260°C service; withstands direct soldering contact.

- Even in thin-walled configurations, Everflon™ PFA 430 withstands industrial soldering temperatures without melt-back or thermal degradation. Rated UL 94 V-0 with a Limiting Oxygen Index (LOI) exceeding 95%, it ensures fire safety and structural integrity in hot industrial equipment.

Low-Loss Dielectric & Universal Chemical Inertness | Clean Signals. Total Corrosion Resistance.

Dielectric constant of 2.03 and dissipation factor ≤ 0.0002 paired with universal chemical resistance.

- Providing frequency-stable dielectric performance, a volume resistivity of 10¹⁸Ω·cm, and near-zero moisture absorption (<0.03%), it protects high-frequency signals against transmission loss while completely repelling aggressive industrial acids, alkalis, and solvents.

Typical Applications

Engineered for High-Throughput Precision Realities.

From high-speed telecom cabling to intricate chemical and fluid components.

Ultra-Fine Wire & Industrial Cable Insulation: High-speed thin-wall extrusion coating for miniature coaxial cables, thermocouple wires, aircraft internal wiring, and industrial leads requiring solder resistance.

Intricate Injection-Molded Electrical & Chemical Parts: Thin-walled connector housings, micro-fittings, multi-pin electronic sockets, and precision valve components handling aggressive industrial media.

Industrial Fluid Handling & Filtration Components: Molded filter end caps, core supports, and compact fluid manifolds exposed to hostile chemical streams and elevated operating temperatures

Food & Pharmaceutical Contact Equipment: Suitable for industrial food processing components in compliance with FDA 21 CFR 177.1690 and European Regulation (EU) No 10/2011.

Processing & Handling Guidelines

Engineered for High-Speed Manufacturing.

High-speed melt processing recommendations for ultra-high-flow fluoroplastics.

Machinery & Corrosion-Resistant Tooling: Everflon™ PFA 430 can be processed using conventional melt extrusion, transfer molding, compression molding, and reciprocating screw injection/blow molding machines. Due to the high processing temperatures and acidic nature of the molten polymer, all barrels, screws, dies, and tooling contact areas must be made from high-nickel, corrosion-resistant alloys (such as Hastelloy® or Inconel®).

Melt Temperature & Extrusion Barrel Profile: The recommended melt temperature ranges up to approximately 390°C. An extruder barrel with a high length-to-diameter (L/D) ratio is recommended to provide sufficient residence time for homogeneous melting of the low-MFR resin. High melt strength allows the use of relatively large die openings and high-temperature draw-down techniques to boost throughput.

Industrial Safety & Storage: Hot processing zones must be equipped with local exhaust ventilation (LEV) to exhaust vapors and thermal decomposition fumes completely. Resin properties are unaffected by storage time under ambient, clean, and dry conditions that prevent moisture condensation and particulate contamination.

Technical
Profile

The Architecture of Performance.

Standardized testing according to ASTM and ISO international protocols.

Parameter	Test Method	Unit	Typical Value
Melt flow rate	ASTM D3307 / ISO 12086	g/10 min	20~30g/10 min
Melting point	ASTM D4591	°C	305 °C
Specific gravity	ASTM D792	—	2.15
Tensile strength at 23 °C	ASTM D3307 / ISO 12086	MPa	>25
Elongation at break at 23 °C	ASTM D3307 / ISO 12086	%	>330
Flexural modulus at 23 °C	ASTM D790 / ISO 178	MPa	690
MIT Folding Endurance (8 mil)	ASTM D2176	Cycles	4,000
Shore D hardness	ASTM D2240 / ISO 868	Shore D	D55
Continuous Service Temp.	Heat Aging Criteria	°C	260
Limiting Oxygen Index (LOI)	ASTM D2863 / ISO 4589	%	>95
Flammability Rating	UL 94	Rating	V-0
Dielectric Constant (1MHz)	ASTM D150 / IEC 250	—	2.03
Dissipation Factor(1MHz)	ASTM D150 / IEC 250	—	<0.0002
Dielectric Strength (0.25mm)	ASTM D149 / IEC 243	kV/mm	80
Volume Resistivity	ASTM D257 / ISO 1325	Ω·cm	10 ¹⁸
Water absorption	ASTM D570	%	<0.03



In modern industrial manufacturing, throughput should never come at the expense of material integrity.

It is the confidence that an ultra-fine wire insulation can be extruded at maximum line speed with zero pinholes.

It is the certainty that an intricate, thin-walled connector can be molded with razor-sharp precision and zero flash.

Everflon™ PFA 430 is where exceptional fluidity meets the unyielding protection of industrial fluoropolymers.

It is the acceleration your production line has been waiting for.

The invisible, lightning-fast foundation empowering high-volume industrial excellence.

Accelerate your production. Master precision with Everflon.

The Velocity of Industrial Precision.

Where rapid flow meets uncompromising endurance.

- Explore the future: www.everflon.com www.everflonultra.com
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