FEP 4622HT

EVERFLON Ultra

Advanced Fluoropolymers

DESCRIPTION

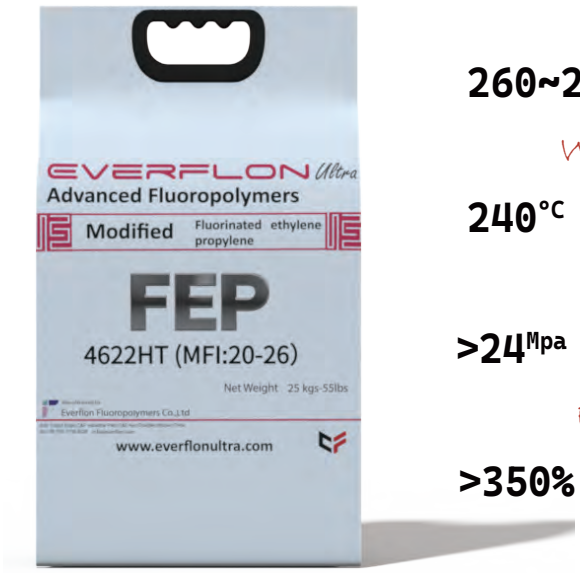
Everflon[ultra™] FEP 4622HT is a melt-processible fluoroplastic resin available in pellet form. It is a copolymer of tetrafluoroethylene, hexafluoropropylene and PPVE, without additives, that meets the requirements of ASTM D 2116 Type II. With a relatively high melt flow rate and excellent electrical properties, Everflon[ultra™™] FEP 4622HT has been specifically designed for high-speed extrusion of thin coatings on small-gauge wires for twisted-pair constructions.

This resin provides the electrical and mechanical properties needed for low voltage applications. In addition, Everflon[ultra™] FEP 4622HT has a higher melt flow rate than most other fluoroplastic resins. This permits higher extrusion speeds and easier processing, making Everflon[ultra™] FEP 4622HT a cost-effective alternative for producing thin-wall extrusions.

Everflon[ultra™] FEP 4622HT is designed and made to have improved adhesion to copper wire under specific wireline process conditions, low dissipation factor at high frequencies, and significant plate-out resistance in melt extrusion. It is suitable as a solid insulator and as a foamed insulator, when used with an appropriate nucleant in a nitrogen gas injection process.

Everflon[ultra™] FEP 4622HT is used when traditional extrusion and molding processes are required for producing products with the superior properties of a fluoroplastic resin. Compared to other thermoplastics, the high melt strength and thermal stability of Everflon[ultra™] FEP 4622HT can be used to improve processing rates.

DATA LIST



Melting Point

260~290°C **260°C**

Working Temperature

240°C **200°C**

Tensile Strength

>24Mpa **>20Mpa**

Elongation at break

>350% **>300%**

General Property Data for Everflon^{ultra}™ FEP 4622HT

Property	Test Method		Unit	Typical Value
PROCESSING				
Specific Gravity	—	ASTM D792	—	2.15
Critical Shear Rate, 372 °C (702 °F)	—	—	1/s	120
Guide DDR Range for Cable Extrusion				100
MECHANICAL				
Impact Strength, Notched Izod, 23 °C (73 °F)		ASTM D256	kJ/m²	No Break
MIT Folding Endurance (0.20 mm, 8 mil film)	—	ASTM D2176	Cycles	100,000
Hardness Durometer	ISO 868	ASTM D2240	—	D56
ELECTRICAL				
Dielectric Strength, Short Time, 0.25 mm (0.010 in)	IEC 243	ASTM D149	kV/mm	> 100
Relative Permittivity, 1 kHz	IEC 250	ASTM D150	—	2.03
Relative Permittivity, 1 GHz	IEC 250	ASTM D150	—	2.03
Dissipation Factor, tg δ, 1 kHz	ISO 1325	ASTM D150		0.00005
Dissipation Factor, tg δ, 1 GHz	ISO 1325	ASTM D150		0.0007
OTHER				
Water Absorption, 24 hr	—	ASTM D570	%	<0.01
Weather and Chemical Resistance	—	—	—	Excellent
Limiting Oxygen Index	ISO 4589	ASTM D2863	%	>95
Continuous Service Temperature	—	—	°C	240
Flammability Classification	—	UL 94	—	V-0

Note: For more information of FEP properties, please visit www.everflon.com or FEP TechBook. These results are based on laboratory tests, under controlled conditions, and do not reflect performance under actual fire conditions.

TYPICAL APPLICATIONS

Applications for Everflon$^{ultra™}$ FEP 4622HT include small diameter, thin wall wire and cable insulation; industrial film; and intricate or thin

PROCESSING GUIDE

Everflon™ FEP fluoroplastic resin can be processed by conventional melt extrusion, and by injection, compression, and blow molding processes.

For smooth feeding to extrusion equipment, it is supplied in 3 mm (0.12 in) pellets.

The extruders and molding machines used for Everflon™ FEP should be constructed of high nickel alloy corrosion-resistant materials and be capable of operating at temperatures up to 400 °C (750 °F)

HANDLING & PACKAGE

Everflon™ FEP is packaged in 25-kg, single layer, plastic bags. For convenient shipment, orders of 1000-kg gallary are recommended.

The properties of Everflon™ FEP resin are not affected by storage time. Ambient storage conditions should be designed to avoid airborne contamination and water condensation on the resin when it is removed from containers.

PRECAUTION

Industrial experience has proven that adequate ventilation, in properly maintained processing and handling areas, will eliminate known hazards to personnel. Resin containers should be opened and used in well-ventilated areas.

Equipment used to process at melt temperatures should be provided with local exhaust ventilation (LEV) to completely remove all fumes and vapors from the processing area. In addition, care should be exercised to avoid the contamination of cigarettes and other forms of smoking tobacco when using fluoroplastic resins.

Before processing any fluoroplastics, read the Material Safety Data Sheet and Guide to the Safe Handling of Fluoropolymer Resins.

FOOD CONTACT COMPLIANCE

Properly processed products made from Everflon$^{ultra™}$ FEP 4622HT resin can qualify for use in contact with food in compliance with FDA 21 CFR 177.1550 and European Regulation (EU) No. 10/2011.

ABOUT C&F AND EVERFLON FLUOROPOLYMERS

Everflon™ is brand of C&F Group dealing in fluoropolymers materials including PTFE.FEP.PFA.ETFE and PVDF. On the basis of Everflon, C&F also developing the fluoropolymer applications including tubing,coating and films.

More information could visit www.everflon.com or Everflon™ Fluoropolymers Introduction and C&F Chemicals Book

For more information, visit www.everflon.com
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