



ENMEX ENTERPRISES

Experts in fluoropolymers

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ABOUT US

Genmex Enterprises is an expert in E-PTFE for your industrial sealing needs and surpassing corrosion barriers.

Largest Independent trader of Fluoropolymer raw material resins (PTFE , FEP, PFA, PVDF, ETFE) in India.

Manufacturer and exporter of semi finished and finished fluoropolymer products (PTFE, FEP , PFA) having more than 12 years of experience.

All the products are of standard quality and passed the FDA , ROHS , CE, ISO & SGS certification to meet industry needs and design. We have a good reputation in European, USA, Middle East & Asian markets.

We offer E-PTFE Sheets, Gaskets, Tape, PTFE Semi finished and finished products, PTFE Medical & Lined Products , Fluoropolymer raw materials for industries across India and Asia.

The Company is founded by Mr. Akshat Jain (CEO) B.tech in Mechanical and Automation Engineering bringing Technical knowledge and development of new products in the field of Fluoropolymers.

Backed my Expertise Mr. Balbir Jain (Bali) bringing 35 years of experience in the Field of Fluoropolymers and is the Consultant on the Board of Genmex.

He is an Engineer from MIT , USA and bring new innovation and technology to cater USA and overseas market.

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FLUOROPOLYMER **RAW MATERIAL**



- Polytetrafluoroethylene (PTFE) Raw Material (Filler Grades, Paste Grade, Molding grade, Extrusion Grade)
- Fluorinated Ethylene Propylene (FEP) Raw Material (Lining, Molding and Extrusion grade)
- Perfluoroalkoxy (PFA) co-polymer Raw material (Lining, Molding and Extrusion grade)
- Ethylene tetrafluoroethylene (ETFE) Raw material (Lining, Molding and Extrusion grade)
- Polyvinylidene fluoride (PVDF) Raw material (Lining, Molding and extrusion grade)

FLUOROPOLYMER RAW MATERIAL

1. PTFE (Polytetrafluoroethylene)



Applications :

1. Thread Seal Tape for Plumbing
2. Coating for medical and health care applications
3. EPTFE used for Dental floss

Polytetrafluoroethylene (PTFE) is a synthetic fluoropolymer of tetrafluoroethylene. PTFE is a thermoplastic polymer, which is a white solid at room temperature, with a density of about 2200 kg/m³ and a melting point of 600 K (327 °C; 620 °F).[15] It maintains high strength, toughness and self-lubrication at low temperatures down to 5 K (-268.15 °C; -450.67 °F), and good flexibility at temperatures above 194 K (-79 °C; -110 °F). They can, however, be vastly improved by the addition of filling materials such as glass fiber, carbon and graphite. PTFE has almost perfect electrical properties. Its dielectric constant is minimal (2.1) as is its dielectric loss factor (0.0002), and this remains the case over a wide range of temperatures and frequencies. PTFE does not burn at an open flame, but degenerates above the continuous operating temperature.

Operating temperature: -200 to +260°C

Melting temperature: +322 to +342°C

Grades : Paste Grade, Molding Grade, Extrusion Grade, Filler Grade

2. FEP (Fluorinated ethylene propylene)



Fluorinated ethylene propylene (FEP) is a copolymer of hexafluoropropylene and tetrafluoroethylene. It is a transparent polymer that remains elastic at low temperatures. FEP is highly resistant to chemicals, as well as to aging and climatic influences. This polymer also boasts good dielectric properties with a minimal dielectric constant. A small friction coefficient testifies to the material's nonstick properties. FEP is conventionally thermoplastically processed. Its high degree of transparency makes FEP ideal for use in inspection glasses and measuring systems. Combined with its nonstick properties, FEP is perfect for liquid handling systems in the food industry.

Operating temperature: -200 to +205°C

Melting temperature: +245 to +280°C


APPLICATION

Wires
Cables
Lined Products

Grade - Lining , Molding and Extrusion grade

3. PFA (Perfluoroalkoxy)

Application :

1. materials for piping and fittings for aggressive chemicals,
2. Corrosion-resistant lining of vessels in the chemical-processing industry. Typical applications
3. construction of gas scrubbers, reactors, containment vessels, and piping. 
4. Wire and Cables



Perfluoroalkoxy alkanes (PFA) are fluoropolymers. They are copolymers of tetrafluoroethylene (C₂F₄) and perfluoroethers (C₂F₃OR_f, where R_f is a perfluorinated group such as trifluoromethyl (CF₃)). The properties of these polymers are similar to those of polytetrafluoroethylene (PTFE). It is melt-processable and can be used in a wide range of operating temperatures. PFA is highly resistant to chemicals, aging and climatic influences. A small friction coefficient testifies to the material's nonstick properties. PFA is a fluorocarbon in which the carbon atoms are fully bonded to the fluorine atoms. The fluorine-carbon bonds are the strongest known molecule bonds and explain the material's chemical resistance. Other polymers and elastomers absorb different amounts of the materials that they come into contact with, and this applies to organic liquids in particular. Absorption with PFA is minimal and a reaction between

PFA and the surrounding media is extremely rare. Permeation is closely linked to absorption. Besides PTFE, PFA offers the highest resistance to creep flow and it has good electric insulation.

Operating temperature: -200 to +260°C

Melting temperature: +280 to +308°C

Grade - Lining ,
Molding and
Extrusion grade

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4. PVDF (Polyvinylidene Fluoride)



Application

- Chemical processing
- Electricity, batteries and electronic components
- Construction and architecture
- Healthcare and pharmaceuticals
- Biomedical research
- Ultra-pure applications
- Nuclear waste handling

Polyvinylidene fluoride or polyvinylidene difluoride (PVDF) is a highly non-reactive thermoplastic fluoropolymer produced by the polymerization of vinylidene difluoride. PVDF is a specialty plastic used in applications requiring the highest purity, as well as resistance to solvents, acids and Hydrocarbons PVDF include low smoke generation, no flame development, mechanical strength and hardness, high abrasion resistance, good temperature stability and good chemical resistance. PVDF is resistant to UV light and radiation, and displays minimal permeability to most gases and liquids. There are two main types of PVDF; one is very rigid and hard, while the other is extremely flexible

Operating temperature: -60 to +150°C.

5. ETFE (Ethylene Tetrafluoroethylene)



APPLICATION

1. Cable and wire industry.
2. Architecture
3. Laminated Thin solar cell films

Ethylene tetrafluoroethylene (ETFE) is a fluorine-based plastic. It was designed to have high corrosion resistance and strength over a wide temperature range. ETFE is a polymer and its source-based name is poly(ethene-co-tetrafluoroethene). ETFE has excellent mechanical properties, strength and tear resistance combined with chemical resistance and outstanding electrical and thermal properties. It is particularly resistant to attacks from all aggressive chemicals and acids. Besides its impressive mechanical properties, ETFE offers excellent abrasion resistance and rigidity. This can be beneficial in applications in which irregular accelerations cause abrasion. ETFE is very popular in the cable and wire industry. But it is also frequently used in architecture, such as in roof constructions made of ETFE foil (Allianz Arena in Munich, Beijing National Aquatics Centre), but also in other areas, such as laminating thin-film solar cells.

Operating temperature: -70 to +150°C

Melting temperature: +210 to +270°C

Grade - Lining, Molding and Extrusion grade

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