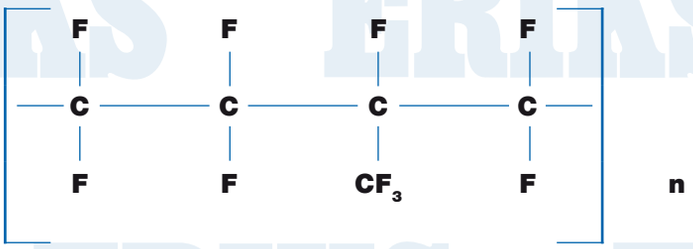
FEP - Tetrafluorethylene-perpfluoropropylene



TECHNICAL DESCRIPTION

Because of its molecular structure, traditional PTFE cannot be processed by melting, but must be compressed into shapes and heated under pressure (sintered). In contrast, FEP is melt-processable by conventional thermoplastic processing methods, including injection, transfer, blow, and compression molding and by extrusion.

NOTE: FEP is available in sheets, rods and tube form

FEP DESCRIPTION

Tetrafluorethylene-Perfluorpropylene (FEP) is produced by copolymerization of tetrafluoroethylene and hexafluoropropylene. It is a relatively soft thermoplastic with lower tensile strength, wear resistance, and creep resistance than many other engineering plastics. However, it is chemically inert and has a low dielectric constant over a wide frequency range. FEP possesses a very high degree of stress crack resistance, a low coefficient of friction, exceptional dielectric properties, heat resistance, retention of properties after service at 400°F (204°C) with useful properties at -454°F (-270°C), and meets FDA 21CFR.177.1550.

FEP has high transparency (with good transmittance of Ultraviolet and visible wavelengths.) It has long term weather ability and excellent resistance to ozone, sunlight and weather.

FEP offers the lowest refractive index of all thermoplastics with low light reflection (the same as water).

FEP is almost not porous. So, FEP has an important application range in linings for pipe and chemical processing equipment roll covers, numerous wire and cable applications, including aircraft wire, plenum cable, fire alarm cable, and well logging cable. A coating with a thickness of 30 µ is totally not porous.

Heat-shrinkable FEP tubing is available. FEP Film is used as glazing in solar energy collectors.

FEP can be welded but it is not easy.

Common FEP tradenames: Daikin Neoflon®, Dupont Teflon®, and Hoechst Hostaflon®.