PVDF

PolyVinyliDene fluoride has an excellent chemical and physical resistance. Such as other fluorinated polymers, it supports temperature variations from -20°C up to +130°C, ultra-violets and the most corrosive chemical agents. The PVDF is a homopolymer without additives, non-toxic, has a particularly smooth surface, which avoids the development of micro-organisms.

The main advantages of PVDF are :

- High chemical resistance,
- Temperature range (-20°C up to 130°C),
- Abrasion resistance,
- High temperature stability,
- Welded easily,
- UV resistance,
- Smooth finish surface.

Excellent chemical resistance:
Excellent resistance to corrosion and abrasion when conveying highly aggressive chemicals. PVDF is basically inert to most inorganic acids and bases, organic acids, aromatic and aliphatic hydrocarbons, alcohols and halogenated solvents. However, it is not recommended for use with fluorine, amines, ketones and oleum (sulfuric acid with sulphur trioxide).

Excellent thermal stability:
PVDF maintains its characteristics unchanged in a temperature range between -40° C and +130° C. PVDF pipes are particularly suitable in all applications requiring high operating temperatures, very low levels of fluid contamination and high resistance to ageing due to atmospheric agents and UV radiation. The material's excellent mechanical properties are retained even at high temperatures.

High abrasion resistance:
according to the Taber Abrasion Test (in which the weight loss of a material is measured after being exposed to an abrasive wheel for 1000 cycles),
PVDF is the most resistant thermoplastic material (CS-10 Load 1kg -
Weight Loss / 1000 cycles = 5-10 mg.)