TECHNICAL DATA SHEET

Approflon
Solutions PTFE

PCTFE

- Excellent mechanical properties
- Very good resistance to creep
- High performance in cryogenic applications
- Excellent electrical-insulating properties
- Low friction behaviour
- High hardness
- Near-zero moisture absorption
- Extremely low permeability
- Excellent barrier properties
- Flame retardant
- Excellent chemical resistance
- Good transparency

	Property	Method	Units	Specification
Physical	Densité	ASTM D 792	g/cm^3	2,10-2,16
	Absorsption d'eau (24 heure)	ASTM D 570	%	<0.01
	Perte de volume au moulage	ASTM D 955	%	1,5-2
Mechanical	Elongation jusqu'à rupture	ASTM D 638	%	50-150
	Elongation à 23°C	ASTM D 638	MPa	31-45
	Résistance à la traction, à 23°C	ASTM D 638	GPa	1-1,6
	Résistance au choc, entaille	ASTM D 256	J/m	≥75
	Dureté Shore	ASTM D 2240	Shore D	70-80
	Déformation sous charge, 7MPa for 24h at 25°C	ASTM D621	%	1
	Déformation sous charge, 7MPa for 24h at 70°C	ASTM D621	%	2,5
	Déformation sous charge, 7MPa for 24h at 125°C	ASTM D621	%	12
Thermal	Température de Fusion	ASTM D3418	°C	210-212
	Capacité Them. spécifique, at 23°C	DSC	kJ kg^{-1} °C^{-1}	0,9
	Conductivité thermique, at 23°C	ASTM E1530	W/mK	0.35
	Temp max. de service, Air		°C	150°C
	Oxygen Index, LOI	ASTM D2863	%	>95
	Inflamabilité	UL94	-	V-0
Electrical	Rigidité diélectique, 1,60mm thk	ASTM D149	kV/mm	21
	Dielectric Constant	ASTM D257	-	2.3
	Résistivité volumique	ASTM D257	Ohm·cm	10^{18}

Typical Application.

The unique balance of properties exhibited by PCTFE suits it to many applications where usual other materials are unsatisfactory.
It has high compressive strength and low deformation under load. It's cold-flow characteristic is lower than other fluoropolymers and it does not deform under load at room temperature. In addition, PCTFE retains its excellent properties over a wide thermal range.
Its great barrier properties makes particularly suitable in films for packaging in applications especially where there are high moisture barrier demands, such as pharmaceutical industry, health care markets, packaging of corrosion-sensitive military and electronic components.PTFCE is characterized by excellent stability, high mechanical strength and a low shrinkage rate at extremely low temperatures. For these reasons, it is widely used for cryogenic seals, low temperature machineries and equipment.
Other applications include chemical apparatus, pump parts, transparent sight glasses, tubes, and linings in the chemical industry and for laboratory ware.