

PRODUCT

VIRGIN PTFE

(polytetrafluoroethylene)

Property	Method	Units	Specification
Specific gravity	ISO 13000-2	g/cm ³	2,130 – 2,180
Tensile strength	ISO 13000-2	MPa	≥ 20
Elongation	ISO 13000-2	%	≥ 200
Hardness	ISO 13000-2	Shore D	≥ 54
Ball Hardness	ISO 13000-2	MPa	≥ 23
Compression strength at 1% deformation		Kg/cm ²	≥ 70
Deformation under load (140 Kg/cm ² for 24 hrs. At 23°C)	ASTM D621	%	10 – 13
Permanent deformation (after 24 hrs. Relaxation at 23°C)	ASTM D621	%	6 – 7,5
Coefficient of static friction	ASTM D1894		0,08 – 0,10
Coefficient of dynamic friction	ASTM D1894		0,06 – 0,08
Thermal conductivity	ASTM C 177	W / m·K	0,24
Dielectric constant (ε) at 60 Hz to 2GHz	ASTM D150	/	2,1
Dielectric Strength	ASTM D149	KV/mm	20 – 70
Volume resistivity	ASTM D257	Ohm·cm	10 ¹⁸
Flamability	UL 94		VE-0
Water absorption	ASTM D570	%	0,01

Service Temperature

- Excellent resistance to continuous service temperatures up to 260° C and, for limited periods, even to higher temperatures; the low temperature resistance of the product allows satisfactory performance at as low –200°C.

Chemical resistance

- PTFE possesses a high inertness towards nearly all known chemicals. It is only attacked by elemental alkali metals, chlorine trifluoride and elemental fluorine at high temperature and pressures.

Solvents resistance:

- PTFE is insoluble in all solvents up to temperatures as high as 300° C (572° F). Certain highly fluorinated oils only swell and dissolve PTFE at temperatures close to the crystalline melting point.

FDA Approved

- (Code of Federal regulation 21 CFR Ch.1, revised as of April 1, 1999 Edition); sections 175.105 - 175.300 - 176.170 - 176.180 - 177.1520 - 177.1550 - 177.2600 - 178.3570. "Perfluorocarbon Resins" of the Food and Drug Administration/USA.P.

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