

Physical properties PTFE virginal

Product characteristics:

- Good mechanical properties
- Exceptional temperature resistance
- High limiting oxygen index
- UV resistance
- Extremely non-adhesive
- Excellent chemical resistance
- Excellent electrical insulating properties
- Low friction behaviour
- Suitable for food contact
- High degree of hydrophobicity

General properties	Test method	Unit	Value
Color	-	-	white
Specific gravity	ASTM D792	g/cm ³	2.130 - 2.190
Water absorption	ASTM D570	%	0.01
Flamability	UL 94		V-0
Thermal properties			
Thermal conductivity	ASTM C177	W/(m·K)	0.34
Coefficient of linear thermal expansion (25 - 100°C)	ASTM D696	10 ⁻⁵ /°C	12 - 15
Max. Working Temperature	-	°C	260
Max. Working Temperature short Periods	-	°C	300
Min. Working Temperature	-	°C	-200
Mechanical properties			
Tensile strength	ASTM D4894	MPa	≥ 20
Elongation	ASTM D4894	%	≥ 200
Hardness	ASTM D2240	Shore D	≥ 54
Ball Hardness	ASTM D785	MPa	≥ 23
Compression strength at 1% deformation	ASTM D695	MPa	≥ 4
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
Wear factor K	ASTM D3702		2.900
Wear coefficient		cm ³ min. 10-8 kg m h	20'000 - 25'000
Electrical properties			
Dielectric strength	ASTM D149	KV/mm	≥ 30
Volume resistivity	ASTM D257	Ohm·cm	10 ¹⁸
Surface resistivity	ASTM D257	Ohm	10 ¹⁷

This table is a valuable help in the choice of a material. The data listed here fall within the normal range of products properties, but they should not be used to establish material specification limits nor used alone as the basis of design.