

TECAFLON PTFE natural - Stock Shapes (rods, plates, tubes)

Chemical Designation

PTFE (Polytetrafluorethylene)

Colour

white opaque

Density

2.15 g/cm³

Main features

- very good chemical resistance
- inherent flame retardant
- continuous service temperature up to 260 °C
- good UV and weather resistance
- very good electrical insulation
- very good slide and wear properties

Target Industries

- aircraft and aerospace technology
- chemical technology
- cryogenic engineering
- food technology
- mechanical engineering
- semiconductor technology

<i>Mechanical properties</i>		<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Tensile strength			22	MPa	ASTM D 4894	1)
Elongation at break (tensile test)			220	%	ASTM D 4894	2)
Compression strength		1% strain	5	MPa	ASTM D 695	
Shore hardness		D	59		DIN EN ISO 868	
<i>Thermal properties</i>		<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Glass transition temperature			- 20	°C	DIN EN ISO 11357	1)
Service temperature		short term	260	°C	-	2)
Service temperature		long term	260	°C	-	
Thermal expansion (CLTE)		23-100°C, long.	13	10 ⁻⁵ K ⁻¹	ASTM D 696	
Thermal conductivity			0.20	W/(K*m)	ASTM C 177	
<i>Electrical properties</i>		<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
surface resistivity			10 ¹⁶	Ω	ASTM D 257	1)
volume resistivity			10 ¹⁷	Ω*cm	ASTM D 257	
Dielectric strength		In air, 0.125mm thick	80	kV/mm	ASTM D 149	
Dielectric constant		50-109Hz	2.1		ASTM D 150	
<i>Other properties</i>		<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Water absorption		23°C	< 0.01	%	ASTM D 570	
Flammability (UL94)		corresponding to	V0		DIN IEC 60695-11-10;	1)

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