

PTFE Virgin

Material data sheet

PTFE Virgin material can be used at operating temperatures from -200°C to +260°C.

It is resistant to almost all chemicals, offers excellent sliding properties, and has high resistance to ageing. The material is FDA approved, making it suitable for use in the food industry.

Due to its lower elasticity, pure PTFE is not suitable for higher mechanical loads. The material also has lower wear resistance. For more demanding applications, it is therefore preferable to use one of the filled PTFE variants.

A detailed chemical resistance table is available upon request.



Properties	Conditions	Standard	Metric		Imperial	
			Unit	Value	Unit	Value
Colour				white		white
Hardness	23 °C / 3 sec	ISO 868	Shore D	55 ± 3	Shore D	55 ± 3
Hardness	23 °C / 15 sec	ISO 868	Shore D	53 ± 3	Shore D	53 ± 3
Ball indentation hardness	23 °C	DIN 53456	MPa	23 ± 3	psi	3335 ± 725
Tensile strength	23 °C	ASTM D4745	MPa	≥ 27	psi	≥ 3916
Compressive strength	23 °C	DIN 53455	MPa	≥ 4	psi	≥ 580
Elongation at break	23 °C	ASTM D4745	%	≥ 250	%	≥ 250
Young's modulus		DIN 53457	MPa	≥ 540	psi	≥ 78500
Specific gravity	23 °C	ISO 1183	kg/m ³	2150	g/cm ³	2,15
Thermal conductivity	23 °C	DIN 52612	J x 10 ³ / m*h*k	0,8	J x 10 ³ / m*h*k	0,8
Coefficient of thermal expansion 25 - 200°C			K ⁻¹ x 10 ⁻⁵	19	K ⁻¹ x 10 ⁻⁵	19
Coefficient of friction, 23 °C*			μ	0,08	μ	0,08
Minimum long-term service temperature			°C	-200	°F	-328
Maximal long-term service temperature			°C	260	°F	500

* coefficient of friction dry dynamic Steel 16MnCR5 v=0,6 m/s; p=0,05 MPa; t=5h



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