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Material Data Sheet T101-W

PTFE-P T101 – white (FDA)

General

T101-W is a virgin PTFE (Polytetrafluorethylene) commonly referred to as Teflon or TFE in white colour. The material has outstanding chemical properties and the lowest coefficient of friction of any solid material. The wide range of temperature (-200°C to +260°C) and the mechanical properties make T101-W a universally usable material for a wide range of applications. Although, T101-W should not be used for dynamic applications in water.

PTFE-P T101 – white is approved for the use of applications in contact with foodstuff.

Physical properties

Density:	DIN 53479	g/cm ³	2,14 - 2,18
Hardness:	DIN 53505	Shore D	60 - 65
Tensile strength:	DIN 53455	N/mm ²	23 - 28
Elongation at break:	DIN 53455	%	250 - 300
Ball Hardness H132/6:	DIN 53456	N/mm ²	25 - 28
Coefficient of friction (dyn.):	ASTM D1894	μ	0,06 - 0,1
Wear factor (K):	ASTM D3702	cm ³ min10 ⁻⁸ /kg m h	2.900
Compr. strength at 1% deformation:	DIN 53454	N/mm ²	4 - 5
Therm. Exp. Coeff. (lin.) 25-100°:	DIN 53328	10 ⁻⁵ /°C	12 - 14,8
Min. service temperature:		°C	- 200
Max. service temperature:		°C	260

Chemical resistance

Water up to 70°	R	Vegetable oils	R
Water up to 90°	R	Fuels	R
HFA	R	Ozone	R
HFB	R		
HFC	R	Air up to 100°	R
HFD	R	Air up to 150°	R
Mineral oils	R	Air up to 200°	R

Key to chemical resistance: R = resistant S = suitable U = unsuitable

Main application

Piston / Rod seals with spring or elastomere energizer, rotary seals, back-up rings, special seals and O-rings, high and low temperature applications, chemical resistance required, low friction applications.

Analysis and Evaluation

The properties relate to fundamental values of virgin PTFE. Product values mentioned above are corresponding to ASTM or DIN standards and have been tested on standardized plates in the laboratory.