Material data sheet
PTFE natural

Chemical Designation:	Polytetrafluorethylene
DIN-abbreviation:	PTFE
Colour / Fillers:	white opaque
Density:	2,15 g/cm³

Main features
- very good chemical resistance
- inherent flame retardant
- continuos 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
- food technology
- cryogenic engineerin
- mechanical engineering
- semiconductor technology

Characteristics

mechanical properties	parameter	value	unit	norm	comment
Tensile strength		22	MPa	ASTM D 4894 1)	1) Tested on extruded and machined specimen 2) Tested on extruded an machined specimen
Elongation at break		220	%	ASTM D 4894 2)	
Compression strength	1 % strain	5	MPa	ASTM D 695	
Shore hardness	Shore D	55		ASTM D 2240	

thermal properties	parameter	value	unit	norm	comment
Glas transition temperature		-20	°C	DIN EN ISO 11357 1)	1) Found in public sources. 2) Found in public sources. Individual testing regarding application conditions is mandatory.
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		12	$10^{-5}\,K^{-1}$	ASTM C 177	

Wilhelm Herm. Müller GmbH & Co. KG
Heinrich-Nordhoff-Ring 14 · 30826 Garbsen · Postfach 141230 · 30812 Garbsen
Tel. +49 5131 4522-0 · Fax: +49 5131 4522-110 · E-Mail: info@whm.net

Material data sheet
PTFE natural

electrical properties	parameter	value	unit	norm	comment
surface resistivity		10^{16}	Ω	ASTM D 257 1)	1) Without defects
volume resistivity		10^{17}	Ω*cm	ASTM D 257	
Dielectric strength	In air, 0,125 mm thick	80	kV/mm	ASTM D 149	
Dielectric constant	50-109 Hz	2,1		ASTM D 150	

other properties	parameter	value	unit	norm	comment
Water absorption	23 °C	< 1.01	%	ASTM D 570	1) Corresponding means no listing at UL (yellow card).The information might be taken from resin, stock shape or estimation. Individual testing regarding application conditions is mandatory.
Flammability	corresponding to	V0		DIN IEC 60695-11-10 1)	

Date: 2020/05/13

Wilhelm Herm. Müller GmbH & Co. KG
Heinrich-Nordhoff-Ring 14 · 30826 Garbsen · Postfach 141230 · 30812 Garbsen
Tel. +49 5131 4522-0 · Fax: +49 5131 4522-110 · E-Mail: info@whm.net