

PTFE E-CARBON virgin PTFE + carbon fillers + additives
 Mechanical, Physical and Thermal Properties

properties	condition	standard	unit		unit	
colour				black		black
density/specific gravity	23 °C	DIN 53479	kg/m ³	2140	g/cm ³	2,14
hardness	23 °C	ISO 868	Shore D	60 ±3	Shore D	60 ±3
ball indentation hardness	23 °C	DIN 53456 H 135/30	MPa	30 ±5	psi	4350 ±725
tensile strength	23 °C	ASTM D 4745-79	MPa	≥ 24	psi	≥ 3480
elongation at break	23 °C	ASTM D 4745-79	%	≥ 250	%	≥ 250
compressive strength	23 °C	DIN 53455	MPa		psi	
thermal conductivity		DIN 52612	$\frac{J \cdot 10^3}{m \cdot h \cdot K}$	≥ 3,5	$\frac{J \cdot 10^3}{m \cdot h \cdot K}$	≥ 3,5
coefficient of thermal expansion	25 °C - 200 °C		K ⁻¹ * 10 ⁻⁵	≥ 10,9	K ⁻¹ * 10 ⁻⁵	≥ 10,9
coefficient of friction *	23 °C		μ	≥ 0,18	μ	≥ 0,18
minimum service temperature			°C	-200	°F	-328
maximum service temperature			°C	260	°F	500
young's modulus		DIN 53457	MPa		psi	

* coefficient of friction dry dynamic Steel 16MnCr5 v=0,6m/s; p=0,05 MPa; t=5h

Chemical Properties

Filled PTFE

Resistant to almost all chemicals

Not resistant to halogenides, elemental fluorine, CF₃, molten alkali metals

Foodstuff applications -