

PTFE Carbon **25 % Carbon + 75 % virgin PTFE**
 Mechanical, Physical and Thermal Properties

properties	condition	standard	unit		unit	
colour				black		black
density/specific gravity	23 °C	DIN 53479	kg/m ³	2060	g/cm ³	2,06
hardness	23 °C	ISO 868	Shore D	67 ±3	Shore D	67 ±3
ball indentation hardness	23 °C	DIN 53456 H 135/30	MPa	35 ±5	psi	5075 ±725
tensile strength	23 °C	ASTM D 4745-79	MPa	≥ 12	psi	≥ 1740
elongation at break	23 °C	ASTM D 4745-79	%	≥ 45	%	≥ 45
compressive strength	23 °C	DIN 53455	MPa		psi	
thermal conductivity		DIN 52612	$\frac{J * 10^3}{m * h * K}$	≥ 3,5	$\frac{J * 10^3}{m * h * K}$	≥ 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	≥ 0,17	μ	≥ 0,17
minimum service temperature			°C	-200	°F	-328
maximum service temperature			°C	260	°F	500
young's modulus	23 °C	DIN 53457	MPa		psi	

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

Chemical Properties

Resistant to almost all chemicals

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

Foodstuff applications - Filled PTFE