

PTFE CARBONGRAPHITE 25% | POLYTETRAFLUOROETHYLENE

► Main features

It has the same characteristics as virgin PTFE, but the addition of coal improves its resistance to wear and deformation and increases its thermal conductivity. Electrical characteristics are improved as well, while the chemical ones remain unchanged. The charcoal charge is always accompanied by a small percentage of graphite to keep the coefficient of friction low.

► Applications

Valve guides
Sealings
Bearings
Bushing
Elastic bands

► Application sectors

Pumps and fluid management
Chemical
Medical and Pharmaceutical
Power Plant, Offshore,
Oil & Gas Mechanic
Industrial automation
Electric and semiconductors

► FDA Compatibility

No

► Available colours



PROPERTIES	REGULATIONS	UM	PTFE CARBON GRAF 25%
PHYSICAL PROPERTIES			
Density	DIN53479	g/cm ³	2.11
Water absorption (50% at 23° C)	**DIN53495	%	-
Maximum temp. for use in the air for short duration	-	°C	-
Maximum temperature of use in continuous air	-	°C	260
Minimum temperature of use in continuous air	-	°C	-200
MECHANICAL PROPERTIES			
Yield stress/tensile strength (σ _s)	*DIN53455 (4)	N/mm ²	-
Elongation at break (ε _s)	ASTMD 4894	%	65
Breaking load (σ _r)	DIN53455	N/mm ²	15-20
Elongation at break (ε _r)	ASTMD 792	%	17
Impact resistance	*DIN53453	kJ/m ²	-
Impact resistance, notched test	*DIN53453	kJ/m ²	-
Rockwell hardness	DIN53465	Scala M	63
Compression test, load 1% deform. nominal	*DIN53454 (3)	N/mm ²	7-9
Elasticity module	*DIN53457 (5)	N/mm ²	-
THERMIC PROPERTIES			
Melting temperature	-	°C	-
VICAT softening temperature	DIN53460	°C	-
Deformation temperature under bending load	DIN53461	°C	-
Coefficient of linear thermal expansion (α)	DIN53752	K ⁻¹ X10 ⁻⁴	8-11
Thermal conductivity at 23°	DIN52612	W/(Kxm)	0.64
ELECTRICAL PROPERTIES			
Volume resistivity	**DIN53482	Ω/cm	10 ⁷
Surface resistivity	**DIN53482	Ω	10 ⁶
Dielectric constant at 10 ³ HZ (on thickness of 1 mm.)	**DIN53483	-	-
Dielectric dissipation factor (tanδ) a 10 ³ HZ	**DIN53483	-	-
Dielectric strength (on thickness of 1 mm.)	**DIN53481	kV/mm	-
Electrical leakage resistivity	112/030TI	-	-
OTHER PROPERTIES			
Possibility of gluing	-	-	No
Absence of physiological risks	FDA	-	No
Dry friction coefficient on steel	DIN53375	-	0,06
Flammability	UL94	-	-
UV stability	-	-	-

* : MEASUREMENTS ON TEST TUBES IN ANHYDROUS STATE
** : MEASUREMENTS ON EQUILIBRIUM TUBES
WITH U.R. 50% AT A TEMPERATURE OF 23° C

(3): ON CYLINDERS Ø 12X30 MM
(5): TRACTION SPEED 1 MM / MIN

(4): TRACTION SPEED 5 MM/MIN
(6): TRACTION SPEED 20 MM/MIN