

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

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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 (tan δ) 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