

TKG® FLON 10CB (PTFE + 10%CARBON)

Density 2,17 g/cm³

Colour Black

Chemical Designation PTFE 90% (Polytetrafluorethylene) + Carbon 10%

PROPERTIES	RESULT	UNIT	PARAMETER	NORM USED
Mechanical properties				
Tensile strength	20 min.	MPa		ASTM D 4894
Tensile strength at yield	-	MPa	50 mm/min	DIN EN ISO 527-2
Elongation at yield	-	%	50 mm/min	DIN EN ISO 527-2
Elongation at break	200 min.	%		ASTM D 4894
Flexural strength	-	MPa	2 mm/min , 10 N	DIN EN ISO 178
Modulus of elasticity (flex test)	-	MPa	2 mm/min , 10 N	DIN EN ISO 178
Compression strength	10 min.	MPa	1%	ASTM D 695
Deformation under load	9 – 11	%	140 Kg/cm ² for 24 h. at 23°C	ASTM D621
Coefficient of static friction	0,14 – 0,15			
Coefficient of dynamic friction	0,10 – 0,11			
Permanent deformation	3 – 5	%	after 24 h. relaxation at 23°C	ASTM D621
Hardness	62 min.	Shore D		ASTM D2240
Thermal properties				
Glass transition temperature	-	°C		DIN 53765
Melting temperature	-	°C		DIN 53765
Service temperature	-200 / +260 min.	°C	Short term	
Service temperature	-200 / +260	°C	Long term	
Thermal expansion	10,5 – 12,5	10 ⁻³ K ⁻¹	25-100°C long	ASTM C 177
Thermal conductivity	-	W / (k*m)		ASTM C 177
Electrical properties				
Radiations resistance	Electr. properties no change		Gamma rays	low
Volume resistance	10 ⁷	Ω*cm		ASTM D 257
Dielectric strength	-	kV / mm	In air	ASTM D 149
Dielectric constant	-		50 – 109 Hz	ASTM D 150
Miscellaneous properties				
Ageing and weatherability	Stable over 20 years exposure			
Resistance to hot mater / bases	-			
Resistance to weathering	-			
Flammability (UL94)	-		According to	DIN IEC 60995-11-10

MAIN CHARACTERISTICS

Good thermal conductivity
 Excellent compression and wear resistance
 Low permeability
 If combined with ceramics, the thermal expansion improves

INDUSTRY APPLICATIONS

Seal applications
 Piston rings for dry compressors
 Bearings
 Grooved mechanical support

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