

# TKG® FLON 15CB (PTFE + 15%CARBON)

Density 2,14 g/cm<sup>3</sup>

Colour Black

Chemical Designation PTFE 85% ( Polytetrafluorethylene) + Carbon 15%

PROPERTIES	RESULT	UNIT	PARAMETER	NORM USED
<b>Mechanical properties</b>				
Tensile strength	14 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	150 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	9 min.	MPa	1%	ASTM D 695
Deformation under load	7 – 9	%	140 Kg/cm <sup>2</sup> 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	2 – 4	%	after 24 h. relaxation at 23°C	ASTM D621
Hardness	62 min.	Shore D		ASTM D2240
<b>Thermal properties</b>				
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	10,0 – 11,5	10 <sup>-3</sup> K <sup>-1</sup>	25-100°C long	ASTM C 177
Thermal conductivity	-	W / (k*m)		ASTM C 177
<b>Electrical properties</b>				
Radiations resistance	Electr. properties no change		Gamma rays	low
Volume resistance	10 <sup>7</sup>	Ω*cm		ASTM D 257
Dielectric strength	-	kV / mm	In air	ASTM D 149
Dielectric constant	-		50 – 109 Hz	ASTM D 150
<b>Miscellaneous properties</b>				
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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