

TKG® FLON 25CBGR (PTFE + 25%CARBON-GRAPHITE)

Density 2,11 g/cm³

Colour Black

Chemical Designation PTFE 75% (Polytetrafluorethylene) + Carbon Graphite 25%

PROPERTIES	RESULT	UNIT	PARAMETER	NORM USED
Mechanical properties				
Tensile strength	17 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	-	MPa	1%	ASTM D 695
Deformation under load	5 – 7	%	140 Kg/cm ² for 24 h. at 23°C	ASTM D621
Coefficient of static friction	0,14 – 0,16			
Coefficient of dynamic friction	0,12 – 0,14			
Permanent deformation	2 – 4	%	after 24 h. relaxation at 23°C	ASTM D621
Hardness	60 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	7 – 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 ⁴	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

INDUSTRY APPLICATIONS

Seal applications
 Piston rings for dry compressors
 Bearings
 Grooved mechanical support

Notice: The information given was made with our knowledge indicating our product's possible applications. Existing commercial patents must be observed. These values represent averages taken from samples, so we reserve the right of technical alterations. We cannot give a legally binding guarantee of certain properties or the suitability for a specific application. The customer is solely responsible for the quality and suitability of products for the application and has to test usage and processing prior to use. Data sheet values are subject to periodic review, the most recent update can be found at www.traidvillarroya.com. Traidamid, TKG and TVH as well as their logos are registered trademarks of the Traid Villarroya group of companies, in Europe and other countries.

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STATEMENT ON SUITABILITY FOR CONTACT WITH FOOD STUFF:

We hereby certify that all our PTFE with 25% carbon-graphite molded and extruded semifinished products, can come in contact with food stuff as per the following requirement:

USA regulations (FDA, Food and Drug Administration, Department of Health and Human Services; Code of Federal Regulations 21 CFR. Ch.1 § 177.1550 (a) (1) and (b)- Perfluorocarbon Resins.

The user must verify that the finished item, made of our semifinished product, would be technically suitable for the requested application. The user must also verify that the finished item may not cause any modification to the organoleptic properties of the food stuff and that the item's technological fitness it is assigned to, may be guaranteed.

For each foreign country market, where the articles are introduced into, it is responsibility of the user to determine whether both materials and articles would comply with the applicable laws and regulations.

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