



Technical data sheet

Rev. 10/2025

PTFE IV (25% carbographite)

Properties	Value	Unit	DIN Standard
Hardness	≥62	Shore D	DIN ISO 7619-1
Density	2,05-2,11	g/cm ³	ASTM D792
Tensile Strength	≥14	N/mm ²	ISO 527
Elongation at Break	≥150	%	ISO 527
Compressive Strength at 1% Deformation	≥7	N/mm ²	ASTM D695
Deformation under Load at Room Temperature After 24 Hours at 13,7 N/mm ²	≤7	%	ASTM D621
Permanent Deformation Under Load After 24 Hours of Rest at Room Temperature	≤5	%	ASTM D621
Dynamic Coefficient of Friction	0,12-0,25	/	ASTM D1894 ASTM D3702
Wear Factor K	0,010-0,020	/	ASTM D3702
Service Temperature (Min-Max)	-200/+260	°C	/
Thermal Expansion Coefficient (Linear) 25 – 100°C	10-12	10 ⁻⁵ (mm/mm)/°C	Similar to ASTM D696

PTFE + 25 % Carbographite is a **carbon-graphite filled PTFE compound** designed to improve on virgin PTFE with a balance of strength, conductivity, and wear performance. It combines PTFE with both carbon fibers and graphite, giving it **good thermal and electrical conductivity, enhanced resistance to deformation, and a low coefficient of friction** compared with unfilled PTFE.

This material also offers **excellent load-bearing ability and wear resistance**, making it well-suited for dynamic sliding and high stress environments.

Typical uses include **bearings for high-speed applications**, especially where quick heat or charge dissipation is needed, **elastic bands for unlubricated compressors**, and **valve seats**.

Compared to plain PTFE, this compound exhibits **lower permanent deformation under load** and better dimensional stability, along with **good chemical resistance** across a wide range of environments.

It also maintains PTFE's broad **service temperature range from around -200 °C up to about +260 °C**, making it applicable in both cryogenic and elevated temperature service.

All data provided above are based on random samples taken from our ongoing production. The results were determined using standard test specimens in accordance with ISO, DIN, and ASTM methods. These results cannot be directly applied to specific finished components.

Any technical information or advice we provide—whether verbal, written, or based on testing—is given to the best of our knowledge. Nevertheless, this information should be regarded as non-binding guidance and does not release the user from the obligation to verify the suitability of our products for their intended process or application. Possible third-party property rights must also be observed.

Since the use, application, and processing of our products take place beyond our control, they remain solely the responsibility of the user. In any case where liability may arise, it shall be limited to damages not exceeding the value of the product supplied and used.

We do, however, guarantee the flawless quality of our products in accordance with our general terms and conditions of sale and delivery.

