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*Technical data sheet*
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# PTFE II. (15% glass fiber + 5% MoS2)

| *Properties* | *Value* | *Unit* | *DIN Standard* |
|---|---|---|---|
| Hardness | *≥55* | *Shore D* | DIN ISO 7619-1 |
| Density | *2,20-3,30* | *$g/cm^3$* | ASTM D792 |
| Tensile Strength | *≥18* | *$N/mm^2$* | ISO 527 |
| Elongation at Break | *≥230* | *%* | ISO 527 |
| Compressive Strength at 1% Deformation | *8* | *$N/mm^2$* | ASTM D695 |
| Deformation under Load at Room Temperature After 24 Hours at 13,7 N/mm2 | *≤8* | *%* | ASTM D621 |
| Permanent Deformation Under Load After 24 Hours of Rest at Room Temperature | *≤4* | *%* | ASTM D621 |
| Dynamic Coefficient of Friction | *0,08-0,18* | */* | ASTM D1894<br>ASTM D3702 |
| Wear Factor K | *0,015-0,021* | */* | ASTM D3702 |
| Service Temperature (Min-Max) | *-200/+260* | *°C* | */* |
| Thermal Expansion Coefficient (Linear) 25 – 100°C | *9-12* | *$10^{-5}$(mm/mm)/°C* | Similar to ASTM D696 |
| | | | |

This is a special compounded PTFE (polytetrafluoroethylene) material that contains about 15 % glass fiber and 5 % molybdenum disulfide ($MoS_2$) to enhance its performance beyond standard PTFE. Its composition gives it excellent wear resistance and a low coefficient of friction, making it suitable for dynamic sliding and bearing applications where durability and low friction are critical. The addition of glass fiber improves structural strength and dimensional stability, while molybdenum disulfide acts as a solid lubricant to reduce wear and cold flow under load. This PTFE performs well across a wide temperature range (from about −200 °C up to around +260 °C) and retains the chemical inertness typical of PTFE, resisting many corrosive environments. It is commonly used in machined parts, seals, bearings, compressor components, and hydraulic/pneumatic systems, especially in demanding industrial and dry sliding environments.