

Application purpose and characteristics

Suitable for sliding functions in damp, wet, or chemically aggressive environments. Also suitable for use with non-hardened mating partner surfaces. Guide- and seal-rings for oil-free piston compressors and shock absorbers.

Low coefficient of friction and high wear resistance along with high compressive strength, heat-dissipating, anti-static, most universal chemical resistance of all PTFE HP grades.

Material name, short description	PTFE
Material name, based on technical standards	Polytetrafluorethylene
Density	2.075 g/cm ³
Color	black
Compound code	PTFE HP110.013-00
Compound	PTFE + carbon powder + graphite

Mechanical properties

Yield stress	≥ 11 N/mm ² ISO 527-1 Cross direction, test speed 50 mm/min
Elongation at break	≥ 80 % ISO 527-1 Cross direction, test speed 50 mm/min
Compressive strength 1	≥ 9 N/mm ² ASTM D 695 1% strain
Residual deformation after 24h	≤ 5 % ASTM D 621
Deformation under load 1	≤ 7 % ASTM D 621 P=13.7 N/mm ² , 24 h
Hardness nominal value	60 Shore D
Ball indentation hardness	≥ 30 N/mm ² ISO 2039-1 H 132/30
Friction coefficient (static)	0.07 to 0.17 ASTM D 3702
Friction coefficient (dynamic)	0.11 to 0.26 ASTM D 3702 PV=0,7 N/mm ² * m/s
Sliding wear	0.010 - 0.020 ASTM D 3702 PV=0,7 N/mm ² * m/s

Thermal attributes

Min. operating temperature	-260 °C
Max. operating temperature long term	280 °C
Coefficient of linear thermal expansion 1	8 - 11 * 10 ⁻⁵ /°C ASTM D 696 25 - 95°C

In compliance with **RoHS** and **REACH** directives.

This information is based on our available data. These values are measured on standard test specimens and are within the normal tolerance range of material properties and do not represent guaranteed property values. Therefore they shall not be used for specification purposes. The customer is solely responsible for quality and suitability of material for his application. He has to test usage and processing prior to use. Angst+Pfister makes no guarantees for the suitability of the material for any given application and assumes no obligation or liability in connection with the information provided above.