

Application purpose and characteristics

For heavy-duty plain bearings, guide- and sealing elements, such as piston rings for non-lubricated compressors with spring preload characteristics. Superior of all PTFE HP grades regarding compressive strength, cold flow behaviour, rigidity, and modulus of bending elasticity. Very high wear resistance and low coefficient of friction, anti-static.

Material name, short description	PTFE
Material name, based on technical standards	Polytetrafluorethylene
Density	2.09 g/cm ³
Color	black
Compound code	PTFE HP117.013-00
Compound	PTFE + long carbon fibres

Mechanical properties

Tensile strength	14 N/mm ² ISO 527-1 Cross direction, test speed 50 mm/min
Elongation at break	25 % ISO 527-1 Cross direction, test speed 50 mm/min
Residual deformation after 24h	≤ 2 % ASTM D 621 Cross direction
Deformation under load 1	≤ 3 % ASTM D 621 P=13.7 N/mm ² , 24 h, cross direction +23 °C
Hardness test value	65 Shore D
Friction coefficient (static)	0.13 ASTM D 3702
Friction coefficient (dynamic)	0.2 ASTM D 3702 PV=0.7 N/mm ² * m/s
Sliding wear	0.025 µm/h 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 * 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.