

**APSOplast® PTFE HP 108 dark red**
**Engineering Plastic Technology  
Technical Data Sheet**
**Application purpose and characteristics**

Suitable for universal use in non-lubricated bearings with tempered mating partners. Sliding elements and slide guides on machine tools. Low coefficient of friction and very high wear resistance, increased compressive strength.

**Product description**

Material name, long description	Polytetrafluorethylene
Material name, short description	PTFE
Compound	PTFE + glass fibre + metal oxide
Material Code	PTFE HP108.013-00
Density	2.26 - 2.29 g/cm <sup>3</sup>
Color	dark red

**Mechanical properties**

Tensile strength	Test value: $\geq 10$ MPa Test norm: ISO 527-1 Test parameter: Cross direction, test speed 50 mm/min
Elongation at break	Test value: $\geq 125$ % Test norm: ISO 527-1 Test parameter: Cross direction, test speed 50 mm/min
Residual Deformation After 24 h	Test value: $\leq 5$ % Test norm: ASTM D 621 Test parameter: Cross direction
Deformation under load	Test value: $\geq 7$ % Test norm: ASTM D 621 Test parameter: P=13.7 N/mm <sup>2</sup> , 24 h, Cross direction + 23°C
Compressive strength	Test value: $\geq 8$ N/mm <sup>2</sup> Test norm: ASTM D 695 Test parameter: Cross direction, 1% strain
Shore hardness	Test value: $\geq 55$ Shore D Test norm: ISO 868
Ball indentation hardness	Test value: $\geq 28$ MPa Test norm: ISO 2039-1 Test parameter: H 132/30
Static friction coefficient	Test value: 0.08 - 0.20 Test norm: ASTM D 3702
Sliding wear	Test value: 0.010 - 0.020 Test norm: ASTM D 3702 Test parameter: PV=0,7 N/mm <sup>2</sup> * m/s
Dynamic friction coefficient	Test value: 0.15 - 0.28 Test norm: ASTM D 3702 Test parameter: PV=0,7 N/mm <sup>2</sup> * m/s

**Thermal properties**

Min. operating temperature	Test value: -260 °C
Max. operating temperature long term	Test value: 280 °C
Coefficient of linear thermal expansion	Test value: $8 - 15 \cdot 10^{-5}/^{\circ}\text{C}$ Test norm: ASTM D 696 Test parameter: 25 – 95°C