APSOplast® PTFE beige

Engineering Plastic Technology
Technical Data Sheet

Application purpose and characteristics

For various components and sealing elements for applications in pneumatics and hydraulics. Chemically stressed components. Sliding elements which are claimed rather static (dynamic only hard counter surface partner).
Suitable for contact with foodstuff.
Compared with PTFE virgin the glass fibres content increases the load capability and wear resistance, especially at higher temperatures. Chemical resistance is only negligibly restricted. The dielectric and anti-adhesive properties are reduced somewhat in comparison with virgin PTFE.

Product description

Material name, long description	Polytetrafluorethylene
Material name, short description	PTFE
Compound	PTFE +25% glass fibres
Material Code	PTFE 125.011-00
Density	2.230 - 2.260 g/cm³
Color	beige

Mechanical properties	
Tensile strength	Test value: ≥ 13 MPa Test norm: ASTM D 4894
Elongation at break	Test value: ≥ 180 % Test norm: ASTM D 4894
Residual Deformation After 24 h	Test value: 5.0 - 6.5 % Test norm: ASTM D 621 Test parameter: after 24h, Relaxation at 23°C
Deformation under load	Test value: 9 - 11 % Test norm: ASTM D 621 Test parameter: 14N/mm², 24h at 23°C
Compressive strength	Test value: ≥ 9 MPa Test parameter: at 1% deformation
Shore hardness	Test value: ≥ 60 Shore D Test norm: ASTM D 2240
Static friction coefficient	Test value: 0.17 - 0.19 Test norm: ASTM D 1894
Dynamic friction coefficient	Test value: 0.15 - 0.17 Test norm: ASTM D 1894

Thermal properties	
Min. operating temperature	Test value: -200 °C
Max. operating temperature long term	Test value: 260 °C
Coefficient of linear thermal expansion	Test value: 7.7 - 11.2 Test norm: ASTM D 696 Test parameter: 25 to 100°C
Electrical properties	
Volume resistivity	Test value: 10^{15} Ohm.cm Test norm: ASTM D 257

Approvals

- FDA 21 CFR 177.1550
- 10/2011/EU
- 1935/2004/EC
- GMP 2023/2006/EC

EC No.1935:2004