

**APSOplast® PCTFE natural (opal)****Engineering Plastic Technology  
Technical Data Sheet****Application purpose and characteristics**

PCTFE is ideal for use in the presence of liquid gas, particularly air and liquid oxygen. Applications: connecting pieces, pump bodies, fittings, seats, valve flaps, insulation units, shaft seals, piston seals etc.

Very good mechanical strength; in particular, low creeping under compressive stress. Non-flammable, even at high oxygen concentrations (100% oxygen index limit). High chemical resistance to mineral acid and a number of organic acids. Excellent resistance to ageing. Practically no moisture absorption and therefore very dimensionally stable. – Impermeable to water and steam.

**Product description**

Material name, long description	Polychlorotrifluoroethylene
Material name, short description	PCTFE
Material Code	PCTFE 00.017-00
Density	2.11 - 2.16 g/cm <sup>3</sup>
Color	natural (opal)

**Mechanical properties**

Modulus of elasticity and tension	Test value: $(1.2 - 1.4) \cdot 10^4$ MPa Test norm: ASTM D 638
Tensile strength	Test value: 33.3 - 39.2 MPa Test norm: ASTM D 638
Elongation at break	Test value: 100 - 250 % Test norm: ASTM D 638
Elongation at rupture	
Deformation under load	Test value: 1.4 - 1.6 % Test norm: ASTM D 621 Test parameter: 24h/686N at 80°C
Compressive strength	Test value: 36 - 41 N/mm <sup>2</sup> Test norm: ASTM D 695 Test parameter: 0.2% off set
	Test value: 11 - 13 N/mm <sup>2</sup> Test norm: ASTM D 695 Test parameter: 1% strain
Impact strength	Test value: 133 - 144 J/m Test norm: ASTM D 256
Shore hardness	Test value: 80 Shore D

**Approvals**

- FDA

