

PCTFE / PTFCE (polychlorotrifluoroethylene)

PCTFE is a fluorinated polymer which presents an exceptional behavior at very low temperature. It is usable in continuation from -200°C to + 150°C with allowable peaks at 200°C. It is non-inflammability, has excellent chemical and radiation resistance, good barrier properties, is insensitivity to oxygen and water with good electrical properties.:

Mechanical properties	Value	Unit	Test Standard
Tensile Modulus	1400	MPa	ISO 527-1/-2
Yield stress	43	MPa	ISO 527-1/-2
Yield strain	7	%	ISO 527-1/-2
Nominal strain at break	>50	%	ISO 527-1/-2
Charpy notched impact strength, +23°C	80	kJ/m ²	ISO 179/1eA
Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	214	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	55	°C	ISO 11357-1/-2
Temp. of deflection under load, 1.80 MPa	70	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	126	°C	ISO 75-1/-2
Oxygen index	100	%	ISO 4589-1/-2
Electrical properties	Value	Unit	Test Standard
Volume resistivity	2E12	Ohm * m	IEC 60093
Surface resistivity	1E15	Ohm	IEC 60093
Electric strength	21	kV/mm	IEC 60243-1
Other properties	Value	Unit	Test Standard
Water absorption	0.01	%	Sim. to ISO 62
Humidity absorption	0.01	%	Sim. to ISO 62
Density	2130	kg/m ³	ISO 1183
Test specimen production	Value	Unit	Test Standard
Compression Molding, molding temperature	265	°C	ISO 293
Compression Molding, molding time	5	min	ISO 293
Compression Molding, demolding temperature	120	°C	ISO 293

Commercial names are: Voltalef[®], Kel-F[®], Neoflon[®], Aclon[®], Halon[®], Fluon[®], Hostaflon[®], Plaskon[®]

The technical specifications in this datasheet are only for information.