

Material Data Sheet

PCTFE - Polychlorotrifluoroethylene

General

- Excellent mechanical properties
- Very good resistance to creep
- High performance in cryogenic applications
- Excellent electrical-insulating properties
- Low friction behavior
- High hardness
- Near-zero moisture absorption
- Extremely low permeability
- Excellent barrier properties
- Flame retardant
- Excellent chemical resistance
- Good transparency

Physical properties

Density(Specific Gravity)	ASTM D-792	g/cm ³ (gm / cc)	2.10 - 2.16
Water Absorption(Max.) 24 hours	ASTM D-570	%	<0.01
Flammability		-	V-0

Mechanical properties

Tensile Strength	ASTM D-638	mpa	31 - 45
Elongation of Break	ASTM D-638	%	50 - 150
Tensile modulus	ASTM D-638	Gpa	1 - 1.6
Hardness Shore	ASTM D-2240	Shore D	70 - 80
Deformation under load, 7MPa for 24h at 25°C	ASTM D-621	%	1
Deformation under load, 7MPa for 24h at 70°C	ASTM D-621	%	2.5
Deformation under load, 7MPa for 24h at 125°C	ASTM D-621	%	12

Thermal properties

Peak Melting Temperature	ASTM D-3418	°C	210 - 212
Specific heat capacity, at 23°C	DSC	kJ kg ⁻¹ °C ⁻¹	0.9
Thermal conductivity, at 23°C	ASTM E-1530	W/mK	0.35
Maximum service temperature	-	°C	150
Oxygen Index,Loi	ASTM D-2863	%	>95

Electrical properties

Dielectric strength, 1.60mm thick	ASTM D-149	Kv/mm	21
Dielectric Constant	ASTM D-257	-	2.3
Volume Resistivity	ASTM D-257	ohm cm	>10 ¹⁸

NOTE:
 *The data stated above are typical values intended for reference and comparison purposes only.
 *The data should not be used as a basis for design specifications or quality control.
 *The information is provided as a guide to the best of our knowledge and given without obligation or liability.
 *Testing under individual application circumstances is recommended.