

TECHNICAL DATA SHEET

VOLTALEF® 402 POWDER

FLUORINATED HOMOPOLYMER POWDER

VOLTALEF® 402 resin is a fluorinated polymer which presents an exceptional behavior at very low temperatures. 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. The processing is critical but can be done by extrusion, injection and compression molding.

TYPE

PCTFE

MAIN APPLICATIONS

- Internal Components
- Aerospace
- Hi Purity
- Molding

TRANSFORMATION PROCESSES

- Film Extrusion
- Injection Molding
- Other Extrusion
- Transfer Molding

MECHANICAL PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Nominal strain at break, 23°C (73°F), 50 mm/min	50	%	ISO 527-1/-2
Charpy notched impact strength, 23°C (73°F)	80	kJ/m2	ISO 179 1eA
Yield stress, 23°C (73°F), 50 mm/min	43	MPa	ISO 527-1/-2
Yield strain, 23°C (73°F), 50 mm/min	7	%	ISO 527-1/-2
Nominal strain at break, 23°C (73°F), 50 mm/min	23	%	ISO 527-1/-2
Yield strain, 23°C (73°F), 50 mm/min	7	%	ISO 527-1/-2
Tensile modulus, 23°C (73°F), 1 mm/min	1400	MPa	ISO 527-1/-2

THERMAL PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Glass transition temperature, 10°C/min	55	°C	ISO 11357-1/-2
Heat deflection temperature, 1.8 MPa	70	°C	ISO 75-1/-2
Heat deflection temperature, 0.45 MPa	126	°C	ISO 75-1/-2
Oxygen index	100	%	ISO 4589-1/-2
Melting temperature, 10°C/min	214	°C	ISO 11357-1/-3

ELECTRICAL PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Surface resistivity	1*10E15	ohm/sq	
Volumic (transversal) resistivity	2*10E12	ohm*m	
Dielectric strength, 23°C (73,4°F)	21	kV/mm	IEC 60243-1

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OTHER PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Water absorption, Saturated in water at 23°C (73°F)	0.01	%	ISO 62
Moisture absorption, At equilibrium at 23°C (73°F) / 50%HR	0.01	%	ISO 62
Apparent density, Non compacted	2130	kg/m ³	

SPECIAL CHARACTERISTICS

- Flame & smoke