

Product Texts

Fortron 4184L4 is the strongest and toughest glass/mineral reinforced product available. It offers excellent heat resistance at high loads and good chemical resistance. The electrical properties are excellent and the product is inherently flame-retardant. This product also offers low creep resistance and good rigidity due to the mineral content. Applications made of this grade include electronic components (i.e. bobbins, connectors and solenoid valves).

Flammability @1.6mm nom. thickn. V-0 -
 Flammability at thickness h (0.75 mm) V-0 -

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
^[C] Molding shrinkage, parallel	0.3	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	0.6	%	ISO 294-4, 2577
^[C] Spec. heat capacity of melt	1600	J/(kg K)	-

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	16600	MPa	ISO 527
^[C] Stress at break	165	MPa	ISO 527
^[C] Strain at break	1.4	%	ISO 527
^[C] Charpy impact strength, +23°C	29	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	29	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	7	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	7	kJ/m ²	ISO 179/1eA

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
ISO Data			
^[C] Melting temperature, 10°C/min	280	°C	ISO 11357-1/-3
^[C] Glass transition temperature, 10°C/min	90	°C	ISO 11357-1/-2
^[C] Temp. of deflection under load, 1.80 MPa	270	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 8.00 MPa	215	°C	ISO 75-1/-2
^[C] Coeff. of linear therm. expansion, parallel	24	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	32	E-6/K	ISO 11359-1/-2
^[C] Burning Behav. at 1.5 mm nom. thickn.	V-0	class	IEC 60695-11-10
Thickness tested	1.5	mm	-
^[C] Burning Behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.8	mm	-

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
ISO Data			
^[C] Relative permittivity, 1MHz	4.7	-	IEC 62631-2-1
^[C] Dissipation factor, 1MHz	20	E-4	IEC 62631-2-1
^[C] Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1
^[C] Surface resistivity	>1E15	Ohm	IEC 62631-3-2
^[C] Electric strength	27	kV/mm	IEC 60243-1

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
^[C] Water absorption	0.02	%	Sim. to ISO 62
^[C] Density	1800	kg/m ³	ISO 1183

[C]: CAMPUS

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	130 - 140	°C	-
Pre-drying - Time	3 - 4	h	-
Melt temperature	320 - 340	°C	-
Mold temperature	≥140	°C	-

Characteristics

Processing

Injection Molding

Features

Creep Resistance

Delivery form

Pellets

Chemical Resistance

General Chemical Resistance

Additives

Release agent

Applications

Electrical and Electronical

Special Characteristics

Flame retardant, Platable, Light stabilized or stable to light, U.V. stabilized or stable to weather, Heat stabilized or stable to heat

Regional Availability

North America, Europe, South and Central America, Near East/Africa

Other text information

Injection molding

Predrying in a dehumidified air dryer at 130 - 140 degC/3-4 hours is recommended.

On injection molding machines with 15-25 D long three-section screws, as are usual in the trade, the FORTRON is processable. A shut-off nozzle is preferred to a free-flow nozzle.

Melt temperature 320-340 degC

Mold wall temperature at least 140 degC

A medium injection rate is normally preferred. All mold cavities must be effectively vented.

Tool temperature of at least 135 degC is recommended for parts to achieve maximum crystallizable potential.