

Product Texts

Injection Molding, 50% Glass Reinforced, Heat Stabilized

ISO 1043 PA6-GF50

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	16300 / 9800	MPa	ISO 527
^[C] Stress at break	220 / 140	MPa	ISO 527
^[C] Strain at break	3 / 5	%	ISO 527
^[C] Tensile creep modulus, 1h	* / 8100	MPa	ISO 899-1
^[C] Tensile creep modulus, 1000h	* / 6600	MPa	ISO 899-1
^[C] Charpy impact strength, +23°C	100 / 100	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	85 / 80	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	20 / 25	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	15 / 13	kJ/m ²	ISO 179/1eA
^[C] Puncture - maximum force, +23°C	1200 / -	N	ISO 6603-2
^[C] Puncture - maximum force, -30°C	1060 / -	N	ISO 6603-2
^[C] Puncture energy, +23°C	4.2 / 8.9	J	ISO 6603-2
^[C] Puncture energy, -30°C	3.7 / -	J	ISO 6603-2

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Melting temperature, 10°C/min	222 / *	°C	ISO 11357-1/-3
^[C] Temp. of deflection under load, 1.80 MPa	205 / *	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	215 / *	°C	ISO 75-1/-2
^[C] Coeff. of linear therm. expansion, parallel	20 / *	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	70 / *	E-6/K	ISO 11359-1/-2
^[C] Burning Behav. at 1.5 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	-
^[C] Oxygen index	24 / *	%	ISO 4589-1/-2

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Relative permittivity, 100Hz	5.3 / 14.2	-	IEC 62631-2-1
^[C] Relative permittivity, 1MHz	4.3 / 5	-	IEC 62631-2-1
^[C] Dissipation factor, 100Hz	360 / 3190	E-4	IEC 62631-2-1
^[C] Dissipation factor, 1MHz	240 / 890	E-4	IEC 62631-2-1
^[C] Volume resistivity	>1E13 / 1E11	Ohm*m	IEC 62631-3-1
^[C] Surface resistivity	* / 1E13	Ohm	IEC 62631-3-2
^[C] Electric strength	35 / 26	kV/mm	IEC 60243-1
^[C] Comparative tracking index	550 / -	-	IEC 60112

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
^[C] Water absorption	5 / *	%	Sim. to ISO 62
^[C] Humidity absorption	1.5 / *	%	Sim. to ISO 62
^[C] Density	1570 / -	kg/m ³	ISO 1183

[C]: CAMPUS

Material specific properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Viscosity number	140 / *	cm ³ /g	ISO 307, 1157, 1628

[C]: CAMPUS

Test specimen production	Value	Unit	Test Standard
ISO Data			
^[C] Injection Molding, melt temperature	280	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 294

[C]: CAMPUS

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	2 - 6	h	-
Processing humidity	≤0.12	%	-
Melt temperature	270 - 290	°C	-
Mold temperature	80 - 120	°C	-

Characteristics

Processing

Injection Molding

Special Characteristics

Heat stabilized or stable to heat

Delivery form

Pellets

Regional Availability

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

Additives

Release agent

Other text information

Injection molding

PREPROCESSING

Residual moisture content: 0.03 - 0.12%

Drying temperature dry air dryer: 80 °C

Drying time dry air dryer 2 - 6 h

PROCESSING

Melt temperature (Tmin - Tmax): 270 - 290 °C

Mold temperature: 80 - 120 °C