

Product Texts

Injection Molding, Unreinforced

ISO 1043 PA6

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	3200 / 900	MPa	ISO 527
^[C] Yield stress	85 / 40	MPa	ISO 527
^[C] Yield strain	4 / 25	%	ISO 527
^[C] Nominal strain at break	20 / >50	%	ISO 527
^[C] Tensile creep modulus, 1h	* / 700	MPa	ISO 899-1
^[C] Tensile creep modulus, 1000h	* / 570	MPa	ISO 899-1
^[C] Charpy impact strength, +23°C	N / N	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	N / N	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	- / 50	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	- / 10	kJ/m ²	ISO 179/1eA
^[C] Puncture energy, +23°C	160 / 165	J	ISO 6603-2
^[C] Puncture energy, -30°C	160 / -	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	55 / *	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	150 / *	°C	ISO 75-1/-2
^[C] Coeff. of linear therm. expansion, parallel	80 / *	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	90 / *	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	4 / 20	-	IEC 62631-2-1
^[C] Relative permittivity, 1MHz	3.5 / 4.5	-	IEC 62631-2-1
^[C] Dissipation factor, 100Hz	120 / 1850	E-4	IEC 62631-2-1
^[C] Dissipation factor, 1MHz	200 / 1350	E-4	IEC 62631-2-1
^[C] Volume resistivity	1E13 / 1E9	Ohm*m	IEC 62631-3-1
^[C] Surface resistivity	* / 1E13	Ohm	IEC 62631-3-2
^[C] Electric strength	30 / 35	kV/mm	IEC 60243-1
^[C] Comparative tracking index	600 / -	-	IEC 60112

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
^[C] Water absorption	10 / *	%	Sim. to ISO 62
^[C] Humidity absorption	3 / *	%	Sim. to ISO 62
^[C] Density	1140 / -	kg/m ³	ISO 1183

[C]: CAMPUS

Material specific properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Viscosity number	213 / *	cm ³ /g	ISO 307, 1157, 1628

[C]: CAMPUS

Test specimen production	Value	Unit	Test Standard
ISO Data			
^[C] Injection Molding, melt temperature	270	°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	260 - 280	°C	-
Mold temperature	80 - 100	°C	-

Characteristics

Processing

Injection Molding

Delivery form

Pellets

Regional Availability

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

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): 260 - 280 °C

Mold temperature: 80 - 100 °C