

Product Texts

Injection Molding, 30% Glass Reinforced, Flame Retardant (halogen free), Heat Stabilized

ISO 1043 PA6-GF30 FR(40)

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
^[C] Melt volume-flow rate, MVR	17 / *	cm ³ /10min	ISO 1133
Temperature	260 / *	°C	-
Load	5 / *	kg	-
^[C] Molding shrinkage, parallel	0.2 / *	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	0.7 / *	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	10300 / 6700	MPa	ISO 527
^[C] Stress at break	130 / 90	MPa	ISO 527
^[C] Strain at break	3 / 6	%	ISO 527
Flexural modulus, 23°C	10200 / 6600	MPa	ISO 178
^[C] Charpy impact strength, +23°C	60 / 68	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	55 / 50	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	- / 13	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	10 / -	kJ/m ²	ISO 179/1eA
Izod impact strength, +23°C	55 / 65	kJ/m ²	ISO 180/1U
Izod notched impact strength, +23°C	10 / 13	kJ/m ²	ISO 180/1A

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Melting temperature, 10°C/min	220 / *	°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	219 / *	°C	ISO 75-1/-2
Vicat softening temperature, B	212 / *	°C	ISO 306
^[C] Coeff. of linear therm. expansion, parallel	20 / *	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	80 / *	E-6/K	ISO 11359-1/-2
^[C] Burning Behav. at 1.5 mm nom. thicken.	V-0 / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	-
Yellow Card available	yes / *	-	-
^[C] Burning Behav. at thickness h	V-0 / *	class	IEC 60695-11-10
Thickness tested	3.0 / *	mm	-
Yellow Card available	yes / *	-	-
^[C] Burning Behav. 5V at thickness h	5VA / *	class	IEC 60695-11-20
Thickness tested	1.5 / *	mm	-
^[C] Oxygen index	32 / *	%	ISO 4589-1/-2
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
GWFI - thickness tested (1)	0.4	mm	-
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
GWFI - thickness tested (2)	0.75	mm	-
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
GWFI - thickness tested (3)	1.5	mm	-
Glow Wire Ignition Temperature (GWIT)	775	°C	IEC 60695-2-13
GWIT - thickness tested (1)	0.4	mm	-
Glow Wire Ignition Temperature (GWIT)	775	°C	IEC 60695-2-13
GWIT - thickness tested (2)	0.75	mm	-
Glow Wire Ignition Temperature (GWIT)	775	°C	IEC 60695-2-13
GWIT - thickness tested (3)	1.5	mm	-

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Relative permittivity, 100Hz	4 / 8	-	IEC 62631-2-1
^[C] Relative permittivity, 1MHz	3.6 / 3.9	-	IEC 62631-2-1
^[C] Dissipation factor, 100Hz	145 / 1130	E-4	IEC 62631-2-1
^[C] Dissipation factor, 1MHz	155 / 655	E-4	IEC 62631-2-1
^[C] Volume resistivity	>1E13 / 2.1E11	Ohm*m	IEC 62631-3-1
^[C] Electric strength	40 / 37	kV/mm	IEC 60243-1
^[C] Comparative tracking index	600 / -	-	IEC 60112

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
^[C] Water absorption	4.6 / *	%	Sim. to ISO 62
^[C] Humidity absorption	1.5 / *	%	Sim. to ISO 62
^[C] Density	1420 / -	kg/m ³	ISO 1183

[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	≤0.07	%	-
Melt temperature	250 - 280	°C	-
Mold temperature	70 - 90	°C	-

Characteristics

Processing

Injection Molding

Special Characteristics

Flame retardant, Halogen-free, Heat stabilized or stable to heat

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 - 0.07%

Drying temperature dry air dryer: 80 °C

Drying time dry air dryer 2 - 6 h

PROCESSING

Melt temperature (Tmin - Tmax): 250 - 280 °C

Mold temperature: 70 - 90 °C