

Product Texts

product-nomenclature: ISO 16396-PA12,,M1HL1R,C18-010N

Product Attributes

Improved heat resistance, Nucleated, Improved UV resistance (outdoor use)

Markets

- Electricals & Electronics**
- Cables & Tubes
- Industry & Consumer goods**
- Hydraulics & Pneumatics

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
^[C] Molding shrinkage, parallel	0.8 / *	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	0.8 / *	%	ISO 294-4, 2577
^[C] Density of melt	860	kg/m ³	-
^[C] Thermal conductivity of melt	0.22	W/(m K)	-
^[C] Spec. heat capacity of melt	2900	J/(kg K)	-
^[C] Eff. thermal diffusivity	8.82E-8	m ² /s	-
^[C] Ejection temperature	140	°C	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	1600 / 1100	MPa	ISO 527
^[C] Yield stress	45 / 40	MPa	ISO 527
^[C] Yield strain	5 / 12	%	ISO 527
^[C] Nominal strain at break	>50 / >50	%	ISO 527
^[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	4 / 4	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	3 / 3	kJ/m ²	ISO 179/1eA
^[C] Shore D hardness	70 / *	-	ISO 7619-1

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Melting temperature, 10°C/min	178 / *	°C	ISO 11357-1/-3
^[C] Temp. of deflection under load, 1.80 MPa	50 / *	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	125 / *	°C	ISO 75-1/-2
^[C] Coeff. of linear therm. expansion, parallel	120 / *	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	140 / *	E-6/K	ISO 11359-1/-2
^[C] Burning Behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	0.8 / *	mm	-

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Volume resistivity	- / 1E11	Ohm*m	IEC 62631-3-1
^[C] Surface resistivity	* / 1E12	Ohm	IEC 62631-3-2
^[C] Electric strength	- / 32	kV/mm	IEC 60243-1
^[C] Comparative tracking index	- / 600	-	IEC 60112

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
^[C] Water absorption	1.5 / *	%	Sim. to ISO 62

Grilamid L 20 LM natural

PA12

EMS-GRIVORY | a unit of EMS-CHEMIE AG

[C] Humidity absorption	0.7 / *	%	Sim. to ISO 62
[C] Density	1010 / -	kg/m ³	ISO 1183

[C]: CAMPUS

Test specimen production	Value	Unit	Test Standard
ISO Data			
[C] Injection Molding, melt temperature	250	°C	ISO 294
Injection Molding, mold temperature	40	°C	ISO 294
Injection Molding, injection velocity	250	mm/s	ISO 294
Injection Molding, pressure at hold	75	MPa	ISO 294

[C]: CAMPUS

Characteristics

Processing

Other Extrusion

Features

Nucleated

Delivery form

Granules, Natural Color

Applications

Electrical and Electronical

Special Characteristics

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

Regional Availability

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

Other text information

Injection molding

PREPROCESSING

Max. water content : <= 0.1 %

PROCESSING

Melt temperature : 250 °C

Mould wall temperature : 40 °C

Holding pressure : 300-800 bar

Screw : 50-100 rpm

Back pressure : 1-15 bar

Injection speed : 2

(1=slow, 3=medium, 5=fast)

Please consider the information about the application of the materials.