

**Product Texts**

Product-nomenclature: ISO 16396-PA12,,M1HR,C18-010

**Product Attributes**

Improved flowability and demoulding, Improved heat resistance, Nucleated, Improved UV resistance (outdoor use)

**Markets**

**Automotive**

Automotive electr. and electronics, lighting, Powertrain and Chassis

**Electricals & Electronics**

Connectors

**Industry & Consumer goods**

Housewares, Hydraulics & Pneumatics, Mechanical Engineering, Sports & Leisure, Tools & Accessories

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Molding shrinkage, parallel	0.8 / *	%	ISO 294-4, 2577
<sup>[C]</sup> Molding shrinkage, normal	0.8 / *	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Tensile Modulus	1400 / 1100	MPa	ISO 527
<sup>[C]</sup> Yield stress	45 / 40	MPa	ISO 527
<sup>[C]</sup> Yield strain	10 / 12	%	ISO 527
<sup>[C]</sup> Nominal strain at break	>50 / >50	%	ISO 527
<sup>[C]</sup> Charpy impact strength, +23°C	N / N	kJ/m <sup>2</sup>	ISO 179/1eU
<sup>[C]</sup> Charpy impact strength, -30°C	N / N	kJ/m <sup>2</sup>	ISO 179/1eU
<sup>[C]</sup> Charpy notched impact strength, +23°C	5 / 7	kJ/m <sup>2</sup>	ISO 179/1eA
<sup>[C]</sup> Charpy notched impact strength, -30°C	6 / 6	kJ/m <sup>2</sup>	ISO 179/1eA
<sup>[C]</sup> Shore D hardness	70 / *	-	ISO 7619-1

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Melting temperature, 10°C/min	178 / *	°C	ISO 11357-1/-3
<sup>[C]</sup> Temp. of deflection under load, 1.80 MPa	45 / *	°C	ISO 75-1/-2
<sup>[C]</sup> Temp. of deflection under load, 0.45 MPa	115 / *	°C	ISO 75-1/-2
<sup>[C]</sup> Coeff. of linear therm. expansion, parallel	120 / *	E-6/K	ISO 11359-1/-2
<sup>[C]</sup> Coeff. of linear therm. expansion, normal	140 / *	E-6/K	ISO 11359-1/-2
<sup>[C]</sup> 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
<b>ISO Data</b>			
<sup>[C]</sup> Volume resistivity	1E11 / 1E11	Ohm*m	IEC 62631-3-1
<sup>[C]</sup> Surface resistivity	* / 1E12	Ohm	IEC 62631-3-2
<sup>[C]</sup> Electric strength	- / 32	kV/mm	IEC 60243-1
<sup>[C]</sup> Comparative tracking index	- / 600	-	IEC 60112

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
<sup>[C]</sup> Water absorption	1.5 / *	%	Sim. to ISO 62
<sup>[C]</sup> Humidity absorption	0.7 / *	%	Sim. to ISO 62

## Grilamid L 20 GM natural

PA12

EMS-GRIVORY | a unit of EMS-CHEMIE AG

[C] Density

1010 / -

kg/m<sup>3</sup>

ISO 1183

[C]: CAMPUS

### Characteristics

#### Processing

Injection Molding

#### Delivery form

Granules, Natural Color

#### Additives

Lubricants

#### Special Characteristics

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

#### Features

Nucleated

#### Applications

Automotive, Electrical and Electronical, Sports Equipment

#### Regional Availability

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