TECHNICAL DATASHEET

Grilamid L XE 16176 (LVL-6H) natural

PA12-GF60

EMS-GRIVORY
Material Database

Physical
Low moisture absorption, High dimensional stability, Low density

Chemical
Excellent weatherability

Mechanical
High stiffness

Others
Good surface finish

Processing
Injection molding

Delivery form
Granules

Product Attributes
Long fiber reinforced

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

Product Information

Product-nomenclature: ISO 16396-PA 12,GF60,M1G,C12-190N

Mechanical Properties	dry/cond	Unit	Standard
Tensile modulus	- / 17200	MPa	ISO 527
Stress at break	- / 215	MPa	ISO 527
Strain at break	- / 2.5	%	ISO 527
Charpy impact strength, +23°C	- / 105	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	- / 195	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C	- / 48	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	- / 48	kJ/m²	ISO 179/1eA
Ball indentation hardness	- / 220	MPa	ISO 2039-1

Thermal Properties	dry/cond	Unit	Standard
Melting temperature, 10°C/min	178 / -	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.80 MPa	175 / -	°C	ISO 75-1/-2
Temp. of deflection under load, 8.00 MPa	162 / -	°C	ISO 75-1/-2

General Properties	dry/cond	Unit	Standard
Density	1630 / -	kg/m³	ISO 1183
Burning behav. at thickness h	HB / -	class	IEC 60695-11-10
Thickness tested	0.8 / -	mm	
Water absorption	0.8 / -	%	Sim. to ISO 62
Humidity absorption	0.4 / -	%	Sim. to ISO 62
Molding shrinkage, parallel	0.15 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	0.3 / -	%	ISO 294-4, 2577

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Processing Injection Molding	Value	Unit	Standard
Hopper zone	≤80	°C	
Feeding zone	≤270	°C	
Compression zone	≤280	°C	
Metering zone	≤290	°C	
Nozzle (IM)	≤285	°C	
Melt	270 - 290	°C	
Mold surface temperature	80 - 120	°C	
Pressure	300 - 800	bar	
Dynamic pressure (hydraulic)	20 - 80	bar	
Circumferencial screw speed	0.07 - 0.33	m/s	

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