TECHNICAL DATASHEET

Grilamid L 20H FWA natural

PA12

EMS-GRIVORY
Material Database

Processing
Injection molding

Delivery form
Granules

Special Characteristics
Light stabilized or stable to light

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

Product Information

Product-nomenclature: ISO 16396-PA12,,M1H,C18-010

Mechanical Properties	dry/cond	Unit	Standard
Tensile modulus	- / 1100	MPa	ISO 527
Yield stress	- / 40	MPa	ISO 527
Yield strain	- / 12	%	ISO 527
Nominal strain at break	- / >50	%	ISO 527
Charpy impact strength, +23°C	- / N	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	- / N	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C	- / 7	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	- / 6	kJ/m²	ISO 179/1eA
Shore D hardness	70 / -		ISO 7619-1
Shore A hardness (15s)	- / 70	-	ISO 868

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	45 / -	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	115 / -	°C	ISO 75-1/-2
Max. usage temperature (long term)	80 - 110	°C	ISO 2578
Max. usage temperature (short term)	150	°C	EMS

Electrical Properties	dry/cond	Unit	Standard
Electric strength	- / 32	kV/mm	IEC 60243-1
Comparative tracking index	- / 600		IEC 60112
Volume resistivity	- / 1E11	Ohm*m	IEC 62631-3-1
Surface resistivity	- / 1E12	Ohm	IEC 62631-3-2

General Properties	dry/cond	Unit	Standard
Density	1010 / -	kg/m³	ISO 1183
Burning behav. at thickness h	HB / -	class	IEC 60695-11-10

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General Properties	dry/cond	Unit	Standard
Thickness tested	0.8 / -	mm	
Water absorption	1.5 / -	%	Sim. to ISO 62
Humidity absorption	0.7 / -	%	Sim. to ISO 62
Molding shrinkage, parallel	0.8 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	0.85 / -	%	ISO 294-4, 2577

Processing Injection Molding	Value	Unit	Standard
Hopper zone	40 - 60	°C	
Feeding zone	220 - 240	°C	
Compression zone	230 - 260	°C	
Metering zone	230 - 270	°C	
Nozzle (IM)	230 - 270	°C	
Melt	240 - 270	°C	
Mold surface temperature	40 - 80	°C	
Injection speed	Medium - High	-	
Pressure	300 - 800	bar	
Dynamic pressure (hydraulic)	50 - 100	bar	
Circumferencial screw speed	5 - 15	m/s	

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