TECHNICAL DATASHEET

Grilamid L XE 10967 natural

PA12-I-X50

EMS-GRIVORY
Material Database

Mechanical
High stiffness

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- PA 12, X50, MHL, C18-070

Mechanical Properties	dry/cond	Unit	Standard
Tensile modulus	7000 / 5500	MPa	ISO 527
Stress at break	40 / 35	MPa	ISO 527
Strain at break	1 / 1	%	ISO 527
Charpy impact strength, +23°C	9 / 9	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	9 / 9	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C	5 / 4	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	4 / 3	kJ/m²	ISO 179/1eA
Ball indentation hardness	105 / 90	MPa	ISO 2039-1

Thermal Properties	dry/cond	Unit	Standard
Melting temperature, 10°C/min	177 / -	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.80 MPa	115 / -	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	160 / -	°C	ISO 75-1/-2
Max. usage temperature (long term)	80	°C	ISO 2578
Max. usage temperature (short term)	130	°C	EMS

Electrical Properties	dry/cond	Unit	Standard
Electric strength	59 / 59	kV/mm	IEC 60243-1
Comparative tracking index	- / 600		IEC 60112
Volume resistivity	1E9 / 1E11	Ohm*m	IEC 62631-3-1
Surface resistivity	- / 1E10	Ohm	IEC 62631-3-2

General Properties	dry/cond	Unit	Standard
Density	1450 / -	kg/m³	ISO 1183
Burning behav. at thickness h	HB / -	class	IEC 60695-11-10
Thickness tested	0.8 / -	mm	
Water absorption	1 / -	%	Sim. to ISO 62

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General Properties	dry/cond	Unit	Standard
Humidity absorption	0.5 / -	%	Sim. to ISO 62
Molding shrinkage, parallel	0.3 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	0.4 / -	%	ISO 294-4, 2577

Processing Injection Molding	Value	Unit	Standard
Hopper zone	≤50	°C	
Feeding zone	230 - 280	°C	
Compression zone	240 - 290	°C	
Metering zone	250 - 290	°C	
Nozzle (IM)	260 - 300	°C	
Melt	265 - 305	°C	
Mold surface temperature	60 - 100	°C	
Injection speed	Low - Medium	-	
Pressure	300 - 800	bar	
Dynamic pressure (hydraulic)	5 - 15	bar	
Circumferencial screw speed	0.08 - 0.17	m/s	

Processing Extrusion	Value	Unit	Standard
Length	18 - 22	mm	
Compression ratio	2 - 2.5		

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