TECHNICAL DATASHEET

Grilamid L 25 G natural 6011

PA12

EMS-GRIVORY
Material Database

Processing
Other extrusion

Delivery form
Granules

Additives
Lubricants

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,,E,C24-010

Mechanical Properties	dry/cond	Unit	Standard
Tensile modulus	- / 1100	MPa	ISO 527
Charpy notched impact strength, +23°C	- / 10	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	- / 7	kJ/m²	ISO 179/1eA

Thermal Properties	dry/cond	Unit	Standard
Melting temperature, 10°C/min	178 / -	°C	ISO 11357-1/-3
Melt volume-flow rate, MVR	20 / -	cm³/10min	ISO 1133
Temperature	275 / -	°C	
Load	5 / -	kg	

General Properties	dry/cond	Unit	Standard
Density	1010 / -	kg/m³	ISO 1183
Water absorption	1.5 / -	%	Sim. to ISO 62
Humidity absorption	0.7 / -	%	Sim. to ISO 62

Film Properties	dry/cond	Unit	Standard
Stress at yield, parallel	35 / -	MPa	ISO 527-3
Stress at yield, normal	35 / -	MPa	ISO 527-3
Strain at yield, parallel	6 / -	%	ISO 527-3
Strain at yield, normal	6 / -	%	ISO 527-3
Stress at break, parallel	80	MPa	ISO 527-3
Stress at break, normal	70	MPa	ISO 527-3
Maximum strain, parallel	850 / -	%	ISO 527-3
Maximum strain, normal	900 / -	%	ISO 527-3
Elmendorf tear resistance, parallel	10 / -	N	ISO 6383-2
Elmendorf tear resistance, normal	10 / -	N	ISO 6383-2
Trouser tear resistance, parallel	20 / -	N/mm	ISO 6383-1

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Film Properties	dry/cond	Unit	Standard
Trouser tear resistance, normal	25 / -	N/mm	ISO 6383-1
WVTR, 23°C/85%r.h.	8 / -	g/(m²*d)	ISO 15106-1/-2
Oxygen transmission rate, 23°C/0%r.h.	350 / -	cm³/(m²*d*bar)	ISO 15105-1/-2
Oxygen transmission rate, 23°C/85%r.h.	370 / -	cm³/(m²*d*bar)	ISO 15105-1/-2
Carbon dioxide transm. rate, 23°C/0%r.h.	1500 / -	cm³/(m²*d*bar)	ISO 15105-1/-2
Carbon dioxide transm. rate, 23°C/85%r.h.	1600 / -	cm³/(m²*d*bar)	ISO 15105-1/-2
Gelboflextest	1300	holes/m²	EMS

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	Low - Medium	-	
Pressure	300 - 800	bar	
Dynamic pressure (hydraulic)	50 - 100	bar	
Circumferencial screw speed	5 - 15	m/s	

Processing Extrusion	Value	Unit	Standard
Length	18 - 22	mm	
Compression ratio	2 - 2.5		
Hopper zone	15 - 60	°C	
Conveying zone	210 - 230	°C	
Compression zone	230 - 250	°C	
Metering zone	230 - 250	°C	
Melt	230 - 250	°C	
Die	230 - 250	°C	
Adapter	230 - 250	°C	

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Created: Aug 25, 2026