TECHNICAL DATASHEET

Grilamid L 25 W 40 X natural 6504

PA12-I

EMS-GRIVORY
Material Database

Physical
Low moisture absorption, Low density, Low melting temperature

Chemical
Excellent chemical resistance, Highly resistant to hydrolysis, Stress cracking resistant

Mechanical
Good cold impact resistance, Good abrasion resistance

Processing
Other extrusion

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-IP,,EHL1,C22-004

Mechanical Properties	dry/cond	Unit	Standard
Tensile modulus	- / 360	MPa	ISO 527
Yield stress	- / 25	MPa	ISO 527
Yield strain	- / 20	%	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	- / N	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	- / 13	kJ/m²	ISO 179/1eA
Ball indentation hardness	- / 30	MPa	ISO 2039-1
Shore A hardness (15s)	- / 63	-	ISO 868

Thermal Properties	dry/cond	Unit	Standard
Melting temperature, 10°C/min	173 / -	°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	95 / -	°C	ISO 75-1/-2
Max. usage temperature (long term)	95	°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

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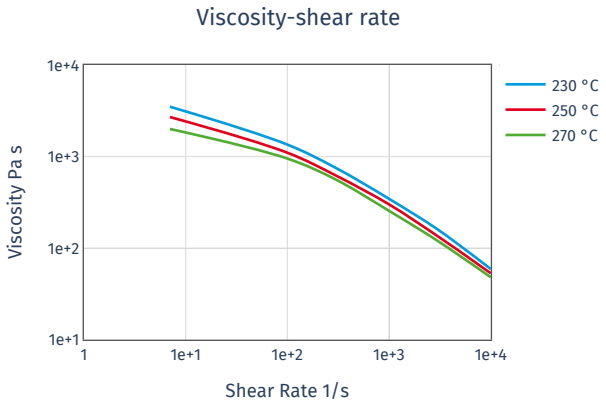
General Properties	dry/cond	Unit	Standard
Density	1030 / -	kg/m³	ISO 1183
Burning behav. at thickness h	HB / -	class	IEC 60695-11-10
Thickness tested	0.8 / -	mm	
Water absorption	1.4 / -	%	Sim. to ISO 62
Humidity absorption	0.7 / -	%	Sim. to ISO 62
Molding shrinkage, parallel	0.9 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	1.3 / -	%	ISO 294-4, 2577

Processing Extrusion	Value	Unit	Standard
Length	24 - 26	mm	
Compression ratio	2.5		
Hopper zone	60 - 90	°C	
Conveying zone	190 - 220	°C	
Compression zone	190 - 220	°C	
Metering zone	190 - 220	°C	
Melt	210 - 220	°C	
Die	200 - 220	°C	
Adapter	200 - 220	°C	

Diagrams





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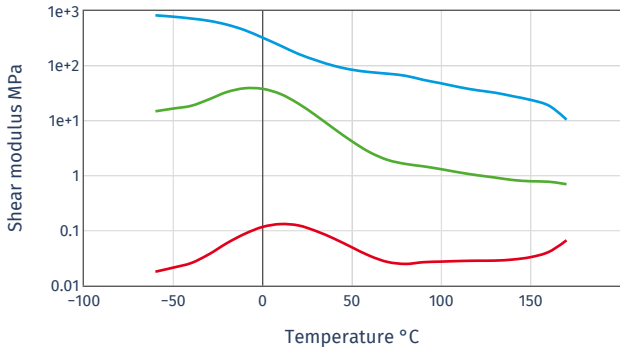
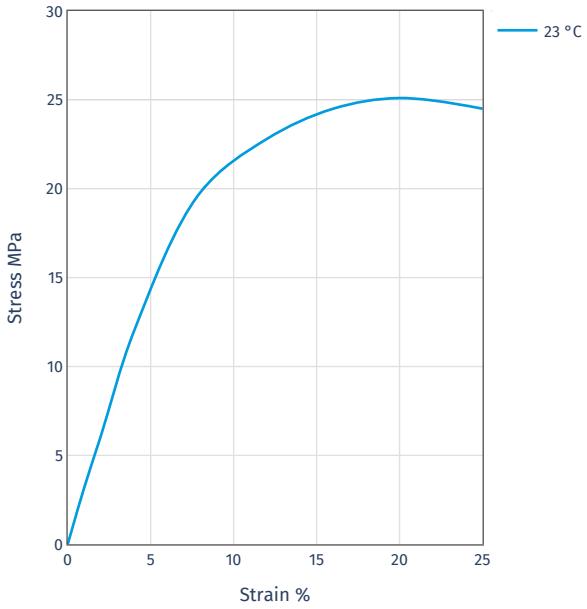
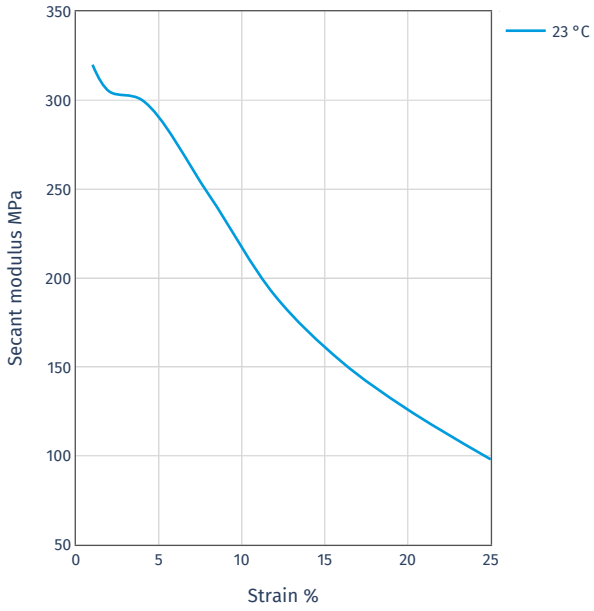
Dynamic shear modulus-temperature (cond)



Stress-strain (cond)



Secant modulus-strain (cond)



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