TECHNICAL DATASHEET

Grilamid LV-50H FWA natural

PA12-GF50

EMS-GRIVORY
Material Database

Chemical
Good chemical resistance, Resistant to hydrolysis

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,GF50,M1H,C18-120

Mechanical Properties	dry/cond	Unit	Standard
Tensile modulus	12000 / 11500	MPa	ISO 527
Stress at break	155 / 135	MPa	ISO 527
Strain at break	5 / 6	%	ISO 527
Charpy impact strength, +23°C	90 / 80	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	90 / 80	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C	19 / 20	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	15 / 15	kJ/m²	ISO 179/1eA
Shore D hardness	82 / -		ISO 7619-1
Ball indentation hardness	- / 155	MPa	ISO 2039-1
Shore A hardness (15s)	- / 82	-	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	165 / -	°C	ISO 75-1/-2
Temp. of deflection under load, 8.00 MPa	125 / -	°C	ISO 75-1/-2
Max. usage temperature (long term)	90 - 120	°C	ISO 2578
Max. usage temperature (short term)	150	°C	EMS

Electrical Properties	dry/cond	Unit	Standard
Electric strength	- / 35	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

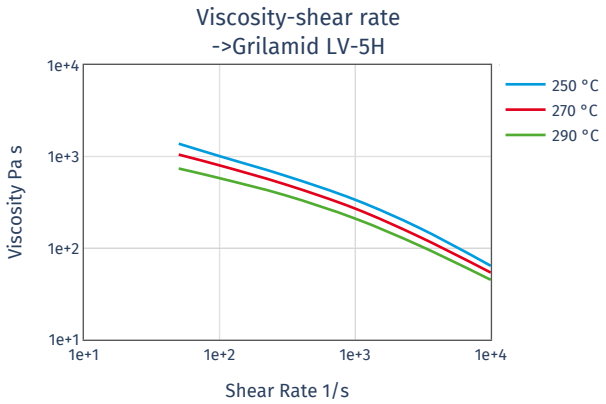
General Properties	dry/cond	Unit	Standard
Density	1470 / -	kg/m³	ISO 1183
Burning behav. at thickness h	HB / -	class	IEC 60695-11-10

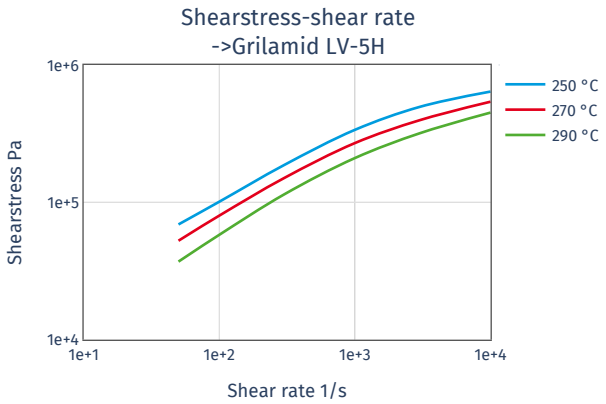
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General Properties	dry/cond	Unit	Standard
Thickness tested	0.8 / -	mm	
Water absorption	0.8 / -	%	Sim. to ISO 62
Humidity absorption	0.4 / -	%	Sim. to ISO 62
Molding shrinkage, parallel	0.1 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	0.5 / -	%	ISO 294-4, 2577

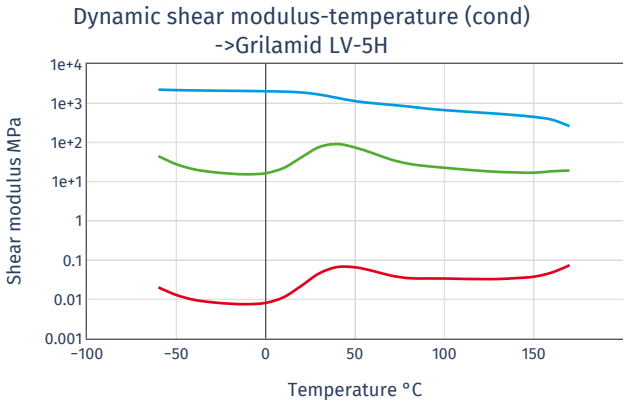
Processing Injection Molding	Value	Unit	Standard
Hopper zone	60 - 80	°C	
Feeding zone	≤265	°C	
Compression zone	≤270	°C	
Metering zone	≤275	°C	
Nozzle (IM)	≤270	°C	
Melt	270 - 290	°C	
Mold surface temperature	≤80	°C	
Injection speed	Low - Medium	-	
Pressure	300 - 800	bar	
Dynamic pressure (hydraulic)	50 - 100	bar	
Circumferencial screw speed	0.1 - 0.3	m/s	

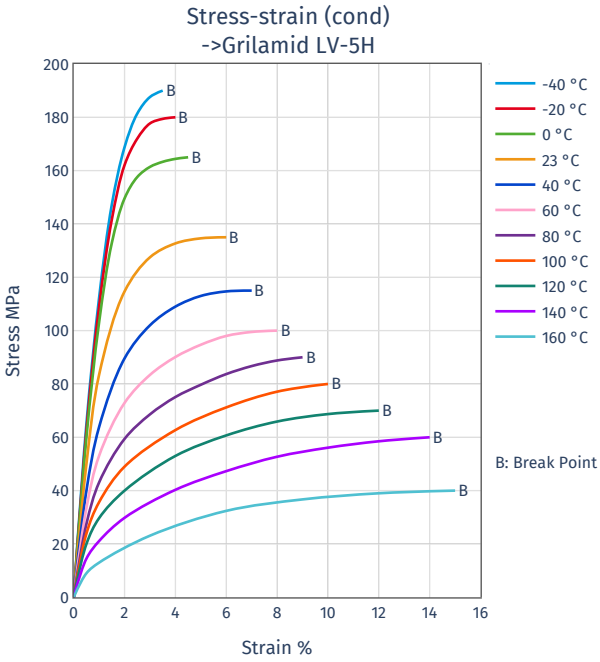
Diagrams

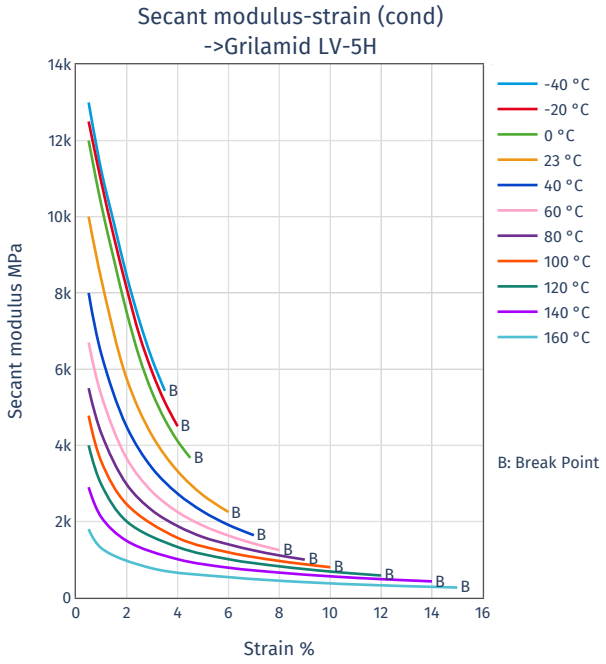




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EMS-CHEMIE AG
Business Unit EMS-GRIVORY

Homepage: EMS-GRIVORY
eMail: welcome@emsgrivory.com

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