TECHNICAL DATASHEET

Grilamid LBKN-50H FWA natural

PA12-GB50

EMS-GRIVORY
Material Database

Physical
Low moisture absorption, High dimensional stability

Chemical
Excellent chemical resistance, Highly resistant to hydrolysis

Mechanical
Good abrasion resistance

Others
Unlimited colourability

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+X,GB50,M1H,C18-040

Mechanical Properties	dry/cond	Unit	Standard
Tensile modulus	3700 / 3500	MPa	ISO 527
Stress at break	50 / 50	MPa	ISO 527
Strain at break	10 / 10	%	ISO 527
Charpy impact strength, +23°C	65 / 60	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	40 / 40	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 / 4	kJ/m²	ISO 179/1eA
Shore D hardness	84 / -		ISO 7619-1
Shore A hardness (15s)	84 / 84	-	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	80 / -	°C	ISO 75-1/-2
Temp. of deflection under load, 8.00 MPa	50 / -	°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 / 35	kV/mm	IEC 60243-1
Comparative tracking index	- / 600		IEC 60112
Volume resistivity	1E9 / 1E9	Ohm*m	IEC 62631-3-1
Surface resistivity	- / 1E10	Ohm	IEC 62631-3-2

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General Properties	dry/cond	Unit	Standard
Density	1490 / -	kg/m³	ISO 1183
Water absorption	1.1 / -	%	Sim. to ISO 62
Humidity absorption	0.5 / -	%	Sim. to ISO 62
Molding shrinkage, parallel	0.55 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	0.6 / -	%	ISO 294-4, 2577

Processing Injection Molding	Value	Unit	Standard
Hopper zone	60 - 80	°C	
Feeding zone	250 - 270	°C	
Compression zone	260 - 280	°C	
Metering zone	260 - 280	°C	
Nozzle (IM)	260 - 290	°C	
Melt	270 - 290	°C	
Mold surface temperature	60 - 100	°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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Created: Aug 25, 2026