TECHNICAL DATASHEET

Grilamid LVX-50H black 9230

PA12-GF50

EMS-GRIVORY
Material Database

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 acc. ISO 1874:
PA12, MHR, 18-190, GF50

Mechanical Properties	dry/cond	Unit	Standard
Tensile modulus	- / 12000	MPa	ISO 527
Stress at break	160 / 145	MPa	ISO 527
Strain at break	3.5 / 3.5	%	ISO 527
Charpy impact strength, +23°C	- / 85	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	- / 85	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C	- / 25	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	- / 20	kJ/m²	ISO 179/1eA
Shore D hardness	82 / -		ISO 7619-1
Ball indentation hardness	160 / 140	MPa	ISO 2039-1
Shore A hardness (15s)	- / 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	170 / -	°C	ISO 75-1/-2
Temp. of deflection under load, 8.00 MPa	130 / -	°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	- / 55	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	0.4 / -	%	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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