TECHNICAL DATASHEET

Grilamid LBV-50H FWA black 9225

PA12-GF50

EMS-GRIVORY
Material Database

Processing
Injection molding

Delivery form
Granules

Special Characteristics
Light stabilized or stable to light

Product Information

Product Nomenclature: ISO 16396-PA12,GF50,M1H,C18-120

Mechanical Properties	dry/cond	Unit	Standard
Tensile modulus	13500 / 12500	MPa	ISO 527
Stress at break	170 / 160	MPa	ISO 527
Strain at break	5 / 5	%	ISO 527
Charpy impact strength, +23°C	95 / 90	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	95 / 90	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C	18 / 18	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	14 / 14	kJ/m²	ISO 179/1eA
Shore D hardness	86 / -		ISO 7619-1
Ball indentation hardness	- / 190	MPa	ISO 2039-1
Shore A hardness (15s)	- / 86	-	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	160 / -	°C	ISO 75-1/-2
Temp. of deflection under load, 8.00 MPa	110 / -	°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	- / 40	kV/mm	IEC 60243-1
Comparative tracking index	- / 600		IEC 60112
Volume resistivity	- / 1E10	Ohm*m	IEC 62631-3-1
Surface resistivity	- / 1E11	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
Thickness tested	0.8 / -	mm	
Water absorption	0.8 / -	%	Sim. to ISO 62

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General Properties	dry/cond	Unit	Standard
Humidity absorption	0.4 / -	%	Sim. to ISO 62
Molding shrinkage, parallel	0.05 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	0.45 / -	%	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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