TECHNICAL DATASHEET

Grilamid XE 3769 black

PA12-I

EMS-GRIVORY
Material Database

Physical
High gloss

Chemical
Good chemical resistance, Excellent weatherability, Stress cracking resistant

Mechanical
High stiffness

Others
Good surface finish

Processing
Injection molding

Product Attributes
Co Polyamide, Transparent Polyamide

Regional Availability
North America, Europe, Asia Pacific, South and Central America, Near East/Africa

Product Information

Product-nomenclature: ISO 16396-PA12-I,,EHZ,C24-010

Mechanical Properties	dry/cond	Unit	Standard
Tensile modulus	- / 1100	MPa	ISO 527
Yield stress	- / 35	MPa	ISO 527
Yield strain	- / 10	%	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	- / 60	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	- / 15	kJ/m²	ISO 179/1eA
Shore D hardness	71 / -		ISO 7619-1

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	50 / -	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	110 / -	°C	ISO 75-1/-2
Max. usage temperature (long term)	100	°C	ISO 2578
Max. usage temperature (short term)	150	°C	EMS

Electrical Properties	dry/cond	Unit	Standard
Volume resistivity	- / 1E7	Ohm*m	IEC 62631-3-1
Surface resistivity	- / 1E7	Ohm	IEC 62631-3-2

General Properties	dry/cond	Unit	Standard
Density	1020 / -	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	1 / -	%	Sim. to ISO 62
Humidity absorption	0.5 / -	%	Sim. to ISO 62
Molding shrinkage, parallel	0.7 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	1.15 / -	%	ISO 294-4, 2577

Processing Injection Molding	Value	Unit	Standard
Hopper zone	≥220	°C	
Feeding zone	≥223	°C	
Compression zone	≥240	°C	
Metering zone	≥240	°C	
Nozzle (IM)	230 - 240	°C	
Melt	240 - 270	°C	
Mold surface temperature	≥80	°C	
Injection speed	Medium - High	-	
Pressure	350 - 800	bar	
Dynamic pressure (hydraulic)	5 - 15	bar	

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