

Grilamid® XE 4176 black 9288

Polyamide 1010

EMS-GRIVORY

Message:

Grilamid® XE 4176 black 9288 is a Polyamide 1010 (Nylon 1010) material filled with 50% glass fiber. It is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America for injection molding.

Important attributes of Grilamid® XE 4176 black 9288 are:

- Flame Rated
- Eco-Friendly/Green
- Heat Resistant
- Impact Resistant
- Typical applications include:
 - Automotive
 - Electrical/Electronic Applications
 - Appliances
 - Engineering/Industrial Parts
 - Household Applications

General Information	
Filler / Reinforcement	Glass Fiber,50% Filler by Weight
Features	High Heat Resistance
	High Impact Resistance
	Renewable Resource Content
Uses	Appliance Components
	Automotive Applications
	Automotive Electronics
	Automotive Exterior Parts
	Automotive Interior Parts
	Connectors
	Electrical/Electronic Applications
	Engineering Parts
	Household Goods
	Hydraulic Applications
	Lighting Applications
	Medical/Healthcare Applications
	Outdoor Applications
	Pneumatic Applications
	Power/Other Tools
	Sporting Goods
Appearance	Black
Forms	Granules
Processing Method	Injection Molding

Physical	Dry	Conditioned	Unit	Test Method
Density	1.50	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.80	--	%	
Flow	0.10	--	%	
Water Absorption				ISO 62
Saturation, 23°C	1.0	--	%	
Equilibrium, 23°C, 50% RH	0.50	--	%	
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness	210	185	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	14000	12200	MPa	ISO 527-2
Tensile Stress (Break)	170	150	MPa	ISO 527-2
Tensile Strain (Break)	4.0	4.5	%	ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	12	12	kJ/m ²	
23°C	16	16	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	90	90	kJ/m ²	
23°C	90	90	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
1.8 MPa, Unannealed	180	--	°C	ISO 75-2/A
8.0 MPa, Unannealed	135	--	°C	ISO 75-2/C
Melting Temperature ¹	200	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow	2.0E-5	--	cm/cm/°C	
Transverse	1.1E-4	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	--	1.0E+10	ohms	IEC 60093
Volume Resistivity	1.0E+11	1.0E+11	ohms·cm	IEC 60093
Electric Strength	38	35	kV/mm	IEC 60243-1
Comparative Tracking Index	--	600	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flammability Classification (0.800 mm)	HB	--		IEC 60695-11-10, -20
Additional Information	Dry	Conditioned		Test Method
ISO Type	PA1010, MHR, 14-080, GF50	--		ISO 1874

NOTE

1. 10°C/min

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

