

Grilamid® XE 4180 nat

Polyamide 1010

EMS-GRIVORY

Message:

Grilamid® XE 4180 nat is a Polyamide 1010 (Nylon 1010) material. It is available in Asia Pacific, Europe, or North America for injection molding. Important attributes of Grilamid® XE 4180 nat are:

- Flame Rated
- Eco-Friendly/Green
- Good Mold Release
- Good UV Resistance
- Impact Resistant
- Typical applications include:
 - Automotive
 - Electrical/Electronic Applications
 - Appliances
 - Engineering/Industrial Parts
 - Household Applications

General Information	
Features	Good Flow Good Mold Release Good UV Resistance High Impact Resistance Renewable Resource Content
Uses	Appliance Components Automotive Applications Automotive Electronics Automotive Exterior Parts Automotive Interior Parts Cell Phones Electrical/Electronic Applications Engineering Parts Household Goods Hydraulic Applications Lighting Applications Medical/Healthcare Applications Outdoor Applications Pneumatic Applications Power/Other Tools Sporting Goods
Appearance	Natural Color
Forms	Granules

Processing Method		Injection Molding		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.05	--	g/cm ³	ISO 1183
Water Absorption				ISO 62
Saturation, 23°C	1.5	--	%	
Equilibrium, 23°C, 50% RH	0.60	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	600	480	MPa	ISO 527-2
Tensile Stress (50% Strain)	30.0	30.0	MPa	ISO 527-2
Tensile Strain (Break)	> 50	> 50	%	ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	5.0	5.0	kJ/m ²	
23°C	No Break	No Break		
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	No Break	No Break		
23°C	No Break	No Break		
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	115	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	55.0	--	°C	ISO 75-2/A
Melting Temperature ¹	194	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow	1.7E-4	--	cm/cm/°C	
Transverse	1.2E-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	35	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-HIP, E, 24-005	--	ISO 1874	
NOTE				
1.	10°C/min			

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