

Grilamid® XE 4181 black

Polyamide 1010

EMS-GRIVORY

Message:

Grilamid® XE 4181 black is a Polyamide 1010 (Nylon 1010) material. It is available in Asia Pacific, Europe, or North America for extrusion.

Important attributes of Grilamid® XE 4181 black are:

- Flame Rated
- Eco-Friendly/Green
- Good Flexibility
- Good UV Resistance
- Heat Resistant
- Typical applications include:
 - Automotive
 - Electrical/Electronic Applications
 - Hose/Tubing
 - Outdoor Applications
 - Wire & Cable

General Information				
Features		Good Flexibility		
		Good UV Resistance		
		High Heat Resistance		
		High Impact Resistance		
		High Viscosity		
		Renewable Resource Content		
Uses		Automotive Applications		
		Electrical/Electronic Applications		
		Hydraulic Applications		
		Outdoor Applications		
		Pneumatic Applications		
		Tubing		
		Wire & Cable Applications		
Appearance		Black		
Forms		Granules		
Processing Method		Extrusion		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.05	--	g/cm ³	ISO 1183
Water Absorption				ISO 62
Saturation, 23°C	1.3	--	%	
Equilibrium, 23°C, 50% RH	0.70	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method

Tensile Modulus	800	600	MPa	ISO 527-2
Tensile Stress (Yield)	40.0	35.0	MPa	ISO 527-2
Tensile Strain (Yield)	30	30	%	ISO 527-2
Nominal Tensile Strain at Break	> 50	> 50	%	ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	--	55	kJ/m ²	
23°C	70 kJ/m ²	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	125	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	55.0	--	°C	ISO 75-2/A
Melting Temperature ¹	197	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow	1.7E-4	--	cm/cm/°C	
Transverse	1.1E-4	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	--	1.0E+11	ohms	IEC 60093
Volume Resistivity	1.0E+11	1.0E+10	ohms·cm	IEC 60093
Electric Strength	39	37	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, 24-007	--		ISO 1874
NOTE				
1.	10°C/min			

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