

Grivory® HT XE 10811 NATURAL

Polyamide 6I/6T Copolymer
EMS-GRIVORY

Message:

Grivory HT XE 10811 Natural is a 40 wt.-% glass fibre reinforced engineering thermoplastic material based on a semi-crystalline, partially aromatic copolyamide. Grivory HT XE 10811 Natural is an injection moulding material.

Acc. to ISO: PA 6T/6I
Acc. to ASTM: PPA, polyphthalamide

The main distinguishing feature of Grivory HT XE 10811 Natural, when compared to other polyamides, is its good performance at high temperatures. Particular properties are:

- chemical resistance
- optimised hydrolysis resistance
- creep resistance
- mechanical properties at high temperatures

Grivory HT XE 10811 Natural is suitable for all engineering thermoplastic applications with the requirement of approvals in contact with food and/or drinking water in combination with high hydrolysis resistance and creep resistance.

General Information				
UL YellowCard		E53898-102795396		
Filler / Reinforcement		Glass fiber reinforced material, 40% filler by weight		
Features		Semicrystallization		
		Aroma		
		Good creep resistance		
		Good chemical resistance		
		Heat resistance, high		
		Hydrolysis resistance		
		Compliance of Food Exposure		
Uses		Non-specific food applications		
		Potable water application		
Agency Ratings		ACS not rated		
		KTW not rated		
		NSF 61		
		WRAS not rated		
		Europe No 10/2011		
RoHS Compliance		RoHS compliance		
Appearance		Natural color		
Forms		Particles		
Processing Method		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.53	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4

Transverse flow	0.55	--	%	ISO 294-4
Flow	0.10	--	%	ISO 294-4
Water Absorption				ISO 62
Saturated, 23°C	3.5	--	%	ISO 62
Equilibrium, 23°C, 50% RH	1.5	--	%	ISO 62
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness	300	300	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	14500	14500	MPa	ISO 527-2
Tensile Stress (Break)	250	230	MPa	ISO 527-2
Tensile Strain (Break)	2.0	2.0	%	ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	11	11	kJ/m ²	ISO 179/1eA
23°C	11	11	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	65	65	kJ/m ²	ISO 179/1eU
23°C	70	70	kJ/m ²	ISO 179/1eU
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
1.8 MPa, not annealed	280	--	°C	ISO 75-2/A
8.0 MPa, not annealed	160	--	°C	ISO 75-2/C
Continuous Use Temperature				
-- ¹	140	--	°C	ISO 2578
-- ²	250	--	°C	Internal method
Melting Temperature (DSC)	325	--	°C	ISO 11357
Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 55°C	1.5E-5	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C	4.5E-5	--	cm/cm/°C	ISO 11359-2
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	--	1.0E+11	ohms	IEC 60093
Volume Resistivity	1.0E+13	1.0E+13	ohms·cm	IEC 60093
Dielectric Strength	30	30	kV/mm	IEC 60243-1
Comparative Tracking Index	--	600	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (0.8 mm)	HB	--		ISO 1210
Additional Information	Dry	Conditioned		Test Method

ISO Type	PA6T/6I, MH, 12-140, GF40	--	ISO 1874
Injection	Dry	Unit	
Drying Temperature			
Hot air dryer	< 80		°C
Vacuum dryer	< 100		°C
Drying Time			
Hot air dryer	4.0 - 12		hr
Vacuum dryer	4.0 - 12		hr
Suggested Max Moisture	0.10		%
Rear Temperature	330 - 340		°C
Middle Temperature	330 - 345		°C
Front Temperature	330 - 345		°C
Nozzle Temperature	330 - 340		°C
Processing (Melt) Temp	340		°C
Injection Rate	Moderate-Fast		
Holding Pressure	50.0 - 75.0		MPa
NOTE			
1.	Long Term		
2.	Short Term		

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