

EMS-Grivory Grivory® XE 4071 nat PA612-I

Category : Polymer , Thermoplastic , Nylon , Nylon 612

Material Notes:

Product description: Grilamid XE 4071 NATURAL is an unreinforced impact modified high viscosity polyamide 612 (PA612) extrusion grade with superior hydrolysis and heat resistance. Compared to standard Grilamid grades XE 4071 NATURAL exhibits an improved resistance when exposed to water/glycol mixtures as found in automotive coolant fluids. Furthermore it is highly resistant to heat, automotive fluids and chemicals in general. Grilamid XE 4071 NATURAL has been developed for use in the cooling / heating system of vehicles. One particular application is the use as outer layer material of the ECOSYS tube solution. Grilamid XE 4071 NATURAL is suitable for other demanding automotive tubings too. ECOSYS (= EMS Cooling System) is the designation of flexible partially corrugated multilayer tubes developed by EMSGRIVORY for automotive heating and cooling systems. Information provided by EMS Grivory

Order this product through the following link:

http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-XE-4071-nat-PA612-I.php

Physical Properties	Metric	English	Comments
Density	1.05 g/cc	0.0379 lb/in ³	ISO 1183
Water Absorption	2.7 %	2.7 %	ISO 62
Moisture Absorption	1.20 %	1.20 %	ISO 62
Linear Mold Shrinkage, Flow	0.030 cm/cm	0.030 in/in	ISO 294-4, 2577
Linear Mold Shrinkage, Transverse	0.0040 cm/cm	0.0040 in/in	ISO 294-4, 2577

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	70.0 MPa	10200 psi	conditioned; ISO 2039-1
	100 MPa	14500 psi	dry; ISO 2039-1
Tensile Strength, Yield	40.0 MPa	5800 psi	dry; ISO 527-1/-2
	50.0 MPa	7250 psi	dry; ISO 527-1/-2
Elongation at Break	>= 50 %	>= 50 %	dry; ISO 527-1/-2
	>= 50 %	>= 50 %	conditioned; ISO 527-1/-2
Elongation at Yield	5.0 %	5.0 %	dry; ISO 527-1/-2
	20 %	20 %	conditioned; ISO 527-1/-2
Tensile Modulus	1.20 GPa	174 ksi	conditioned; ISO 527-1/-2
	2.00 GPa	290 ksi	dry; ISO 527-1/-2
Charpy Impact Unnotched	NB	NB	dry; ISO 179/1eU

Mechanical Properties	Metric	English	Comments
	NB	NB	dry; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
	NB	NB	conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
Charpy Impact, Notched	4.00 J/cm²	19.0 ft-lb/in²	dry; ISO 179/1eA
	9.00 J/cm²	42.8 ft-lb/in²	conditioned; ISO 179/1eA
	1.20 J/cm²	5.71 ft-lb/in²	dry; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
	1.30 J/cm²	6.19 ft-lb/in²	conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	160 µm/m-°C	88.9 µin/in-°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	100 µm/m-°C	55.6 µin/in-°F	ISO 11359-1/-2
Melting Point	210 °C	410 °F	10°C/min; ISO 11357-1/-3
Maximum Service Temperature, Air	120 - 140 °C	248 - 284 °F	long term; EMS
	160 °C	320 °F	short term; EMS
Deflection Temperature at 0.46 MPa (66 psi)	115 °C	239 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	55.0 °C	131 °F	ISO 75-1/-2
Flammability, UL94	HB	HB	IEC 60695-11-10

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+12 ohm-cm	1.00e+12 ohm-cm	dry; IEC 60093
	1.00e+12 ohm-cm	1.00e+12 ohm-cm	conditioned; IEC 60093
Surface Resistance	1.00e+11 ohm	1.00e+11 ohm	IEC 60093
Dielectric Strength	40.0 kV/mm	1020 kV/in	dry; IEC 60243-1
	40.0 kV/mm	1020 kV/in	conditioned; IEC 60243-1
Comparative Tracking Index	600 V	600 V	conditioned; IEC 60112

Descriptive Properties	Value	Comments
Automotive	Air intake sytems	
	Automotive electr. and electronics, lighting	
	Compressed air systems	
	Cooling and climate control	
	Hydraulic systems	
Electricals & Electronics	Cables & Tubes	
Form	Granules	
Industry & Consumer goods	Hydraulics & Pneumatics	
Processing	Other Extrusion	
	Profile Extrusion	
Product Attributes	High viscosity	
	Hydrolysis resistant	
Special Characteristics	High impact or impact modified	
	Improved heat resistance	

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