

EMS-Grivory Grivory® XE 3997 nat PAMACM12

Category : Polymer , Thermoplastic , Nylon , Nylon 12

Material Notes:

Product description: Grilamid XE 3997 natural is a transparent thermoplastic polyamide based on aliphatic and cycloaliphatic blocks. Grilamid XE 3997 natural is particularly suitable for blow molded bottles and offers a variety of interesting properties such as: High transparencyLight and clear natural colorToughnessStiffnessFDA approvedLow densityComfortable surface feelSuitable for IBM & ISBM processes Grilamid XE 3997 natural can be used as an alternative to bisphenol A (BPA) containing materials, as well as for the production of optical and technical demanding parts in application fields such as: Baby careHousewarePackagingBlow-molded containersInformation provided by EMS Grivory

Order this product through the following link:

http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-XE-3997-nat-PAMACM12.php

Physical Properties	Metric	English	Comments
Density	1.00 g/cc	0.0361 lb/in ³	ISO 1183
Water Absorption	3.0 %	3.0 %	ISO 62
Moisture Absorption	1.50 %	1.50 %	ISO 62
Linear Mold Shrinkage, Flow	0.0070 cm/cm	0.0070 in/in	ISO 294-4, 2577
Linear Mold Shrinkage, Transverse	0.0080 cm/cm	0.0080 in/in	ISO 294-4, 2577

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	90.0 MPa	13100 psi	conditioned; ISO 2039-1
Tensile Strength at Break	45.0 MPa	6530 psi	conditioned; ISO 527-1/-2
Tensile Strength, Yield	60.0 MPa	8700 psi	conditioned; ISO 527-1/-2
Elongation at Break	>= 50 %	>= 50 %	conditioned; ISO 527-1/-2
	>= 50 %	>= 50 %	conditioned; ISO 527-1/-2
Elongation at Yield	6.0 %	6.0 %	conditioned; ISO 527-1/-2
Tensile Modulus	1.60 GPa	232 ksi	conditioned; ISO 527-1/-2
Charpy Impact Unnotched	NB	NB	conditioned; ISO 179/1eU
	NB	NB	conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
Charpy Impact, Notched	1.30 J/cm ²	6.19 ft-lb/in ²	conditioned; ISO 179/1eA
	1.20 J/cm ²	5.71 ft-lb/in ²	conditioned; ISO 179/1eU

Mechanical Properties	Metric @ Temperature 30.0 °C	English @ Temperature 86.0 °F	Comments
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Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	90.0 µm/m-°C	50.0 µin/in-°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	90.0 µm/m-°C	50.0 µin/in-°F	ISO 11359-1/-2
Maximum Service Temperature, Air	80.0 - 100 °C	176 - 212 °F	long term; EMS
	120 °C	248 °F	short term; EMS
Transformation Temperature, Tg	155 °C	311 °F	10°C/min; ISO 11357-1/-2
Deflection Temperature at 0.46 MPa (66 psi)	135 °C	275 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	115 °C	239 °F	ISO 75-1/-2
Flammability, UL94	HB	HB	IEC 60695-11-10

Optical Properties	Metric	English	Comments
Transmission, Visible	90 %	90 %	transparent; thickness not quantified

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	conditioned; IEC 60093
Surface Resistance	1.00e+12 ohm	1.00e+12 ohm	IEC 60093
Dielectric Strength	34.0 kV/mm	864 kV/in	conditioned; IEC 60243-1
Comparative Tracking Index	600 V	600 V	conditioned; IEC 60112

Descriptive Properties	Value	Comments
Food contact	EU Requirements	
	FDA	
Form	Granules	
Medical	FDA	
Packaging	Blow moulded containers	
	Injectionstretchblowmoulded containers	
Processing	Extrusion - blow molding	
	Injection (stretch) blow molding	

Descriptive Properties	Value	Comments
Special Characteristics	Transparent	

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