Product Data Sheet

Eastar™ Copolyester GN007, Natural

Application/Uses

- Cosmetic jar caps
- Cosmetic jars
- Flashlight lens
- Floor care
- Furniture/Furniture trim
- Housewares
- Lipstick containers
- Oral hygiene
- Plastics for hygiene feminine products
- Refrigerator interior components
- Stationery supplies
- Toothbrushes
- Toys/Sporting goods
- Writing instruments

Product Description

Eastar™ GN007 Copolyester is a water-clear glycol modified polyethylene terephthalate (PET) with an added mold release. Eastar™ GN007 copolyester will not crystallize and thus offers wider processing latitude than conventional crystallizable polyesters. This material offers an excellent combination of clarity, toughness, and melt strength that makes it useful for a variety of processing techniques and end-use applications.

This product has been GREENGUARD INDOOR AIR QUALITY CERTIFIED®.
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Typical Properties

Property[a]	Test[b] Method	Typical Value, Units[c]
General Properties		
Specific Gravity	D 792	1.27
Mold Shrinkage Parallel to Flow, 3.2-mm (0.125-in.) thickness	D 955	0.002-0.005 mm/mm (0.002-0.005 in./in.)

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Thermal Properties		
Deflection Temperature		
@ 0.455 MPa (66 psi)	D 648	70°C (158°F)
@ 1.82 MPa (264 psi)	D 648	62°C (143°F)

Thermal Properties (ISO Method)		
Deflection Temperature		
@ 0.455 MPa (66 psi)	ISO 75	70°C
@ 1.82 MPa (264 psi)	ISO 75	62°C

Mechanical Properties		
Tensile Stress @ Break	D 638	30 MPa (4300 psi)
Tensile Stress @ Yield	D 638	50 MPa (7200 psi)
Elongation @ Break	D 638	180%
Elongation @ Yield	D 638	4.4%
Tensile Modulus	D 638	2030 MPa (2.9 x 10^5 psi)
Flexural Strength	D 790	68 MPa (9800 psi)
Flexural Modulus	D 790	2060 MPa (3.0 x 10^5 psi)
Rockwell Hardness, R Scale	D 785	108
Izod Impact Strength, Notched		
@ 23°C (73°F)	D 256	105 J/m (1.9 ft·lbf/in.)
@ -40°C (-40°F)	D 256	40 J/m (0.7 ft·lbf/in.)
Impact Strength, Unnotched		
@ 23°C (73°F)	D 4812	NB
@ -40°C (-40°F)	D 4812	NB

Mechanical Properties (ISO Method)		
Tensile Strength @ Yield	ISO 527	48 MPa
Tensile Strength @ Break	ISO 527	29 MPa
Elongation @ Yield	ISO 527	4%
Elongation @ Break	ISO 527	200%
Tensile Modulus	ISO 527	2000 MPa
Flexural Modulus	ISO 178	2100 MPa
Flexural Strength	ISO 178	67 MPa
Izod Impact Strength, Notched		
@ 23°C	ISO 180	9.4 kJ/m^2
@ -40°C	ISO 180	4.4 kJ/m^2

Optical Properties		
Haze	D 1003	0.2%
Total Transmittance	D 1003	90%

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Typical Processing Conditions	
Drying Temperature	71°C (160°F)
Drying Time	6 hrs
Processing Melt Temperature	249-271°C (480-520°F)
Mold Temperature	16-38°C (60-100°F)

[a] *Unless noted otherwise, all tests are run at 23°C (73°F) and 50% relative humidity.*

[b] *Unless noted otherwise, the test method is ASTM.*

[c] *Units are in SI or US customary units.*

Comments

Properties reported here are based on limited testing. Eastman makes no representation that the material in any particular shipment will conform exactly to the values given.

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