EASTMAN

Technical Data Sheet

Eastar™ Copolyester GN071, Natural

Application/Uses

- Cosmetic jars
- Cosmetics/personal care packaging
- Credit cards
- Debit cards
- Furniture guards
- Furniture/Furniture trim
- Gaming cards
- Gift cards
- Housewares
- Identification cards
- Phone cards
- Plastic Cards
- Smart cards
- Stationery supplies
- Toys/Sporting goods
- Writing instruments

Key Attributes

- Easy to extrude, cut, print, and seal
- Effective barrier properties
- Excellent chemical resistance
- Excellent clarity
- Excellent colorability
- Good impact strength
- Good stiffness
- High gloss appearance
- Toughness

Product Description

Eastar™ GN071 Copolyester is used for injection molding applications. It is sparkling clear, tough, chemical resistant, odor free, versatile, easy to work with and affordable. Cleaning solutions will not turn Eastar™ GN071 white. This makes this product one of our most versatile materials for the cosmetics and personal care packaging market. Eastar™ GN071 Copolyester is certified to NSF/ANSI Standard 51 for Food Equipment Materials.

This product has been GREENGUARD INDOOR AIR QUALITY CERTIFIED
The GREENGUARD INDOOR AIR QUALITY CERTIFIED Mark is a registered certification mark used under license through the GREENGUARD Environmental Institute (GEI). GEI is an industry-independent, non-profit organization that oversees the GREENGUARD Certification Program. The GREENGUARD Certification Program is an industry independent, third-party testing program for low-emitting products and materials for indoor environments. For more information about GEI and to obtain printable certificates for Eastman™ Copolyesters, visit www.greenguard.org. Choose Eastman Chemical Company under the Manufacturer category and click search to display a list of our products.

This product has been CRADLE TO CRADLE CERTIFIED^{cm} Silver.
The CRADLE TO CRADLE CERTIFIED Mark is a registered certification mark used under license through McDonough Braungart Design Chemistry (MBDC). MBDC is a global sustainability consulting and product certification firm. The CRADLE TO CRADLE framework moves beyond the traditional goal of reducing the negative impacts of commerce ('eco-efficiency'), to a new paradigm of increasing its positive impacts ('eco-effectiveness'). At its core, Cradle to Cradle design perceives the safe and productive processes of nature's 'biological metabolism' as a model for developing a 'technical metabolism' flow of industrial materials. Product components can be designed for continuous recovery and reutilization as biological and technical nutrients within these metabolisms. For more information about MBDC and to obtain printable certificates for Eastman Copolyesters, visit www.mbdc.com. Choose Eastman Chemical Company under Company Name in C2C Certified products to display a list of our products.

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.)
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%

Typical Processing Conditions	
Drying Temperature	63°C (145°F)
Drying Time	6-8 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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