

Technical Data Sheet

Eastar™ Copolyester GN071, Natural

Applications

- Bottles-color cosmetics pkg
- Bottles-skin care pkg
- Closures-fragrance pkg
- Color cosmetics packaging
- Commercial housewares
- Consumer housewares-nfc
- Diffuser film
- Displays/in-store fixtures
- Film modification
- Fragrance packaging
- Furniture
- Graphic arts
- Home, garden & automotive packaging
- Jars-skin care pkg
- Lenticular
- Lighting
- Ophthalmics
- Packaging component films
- Packaging components non food contact
- Pens/stationary
- Personal care & cosmetics packaging
- Point-of-purchase
- Profiles
- Protective & performance film
- Shrink film non food contact
- Skin care packaging
- Sporting equipment
- Thermoformed sheet
- Transaction cards
- Visual merchandising
- Wood furniture

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*™ Bronze, with Material Health Certificate, Platinum. The *CRADLE TO CRADLE CERTIFIED* mark is a registered certification mark used under license through the Cradle to Cradle Products Innovation Institute, a nonprofit organization that administers the publicly available *Cradle to Cradle Certified*™ Product Standard which provides designers and manufacturers with criteria and requirements for continually improving product materials and manufacturing processes. The *Cradle to Cradle Certified*™ Product Standard guides designers and manufacturers through a continual improvement process that looks at a product

through five quality categories—material health, material reutilization, renewable energy and carbon management, water stewardship, and social fairness. A product receives an achievement level in each category—Basic, Bronze, Silver, Gold, or Platinum—with the lowest achievement level representing the product’s overall mark.

The Material Health Certificate provides manufacturers with a trusted way to communicate their efforts to identify and replace chemicals of concern in their products. For more information about Cradle to Cradle certification and to obtain printable certificates for Eastman copolyesters, visit www.c2ccertified.org. Search for Eastman Chemical Company in *Cradle to Cradle Certified* Products Registry.

Typical Properties

Property ^a	Test Method ^b	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.)
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
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
Optical Properties		
Haze	D 1003	0.2 %
Total Transmittance	D 1003	90 %
Thermal Properties (ISO Method)		
Deflection Temperature @ 0.455 MPa (66 psi)	ISO 75	70 °C
@ 1.82 MPa (264 psi)	ISO 75	62 °C
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)
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)

^aUnless noted otherwise, all tests are run at 23°C (73°F) and 50% relative humidity.

^bUnless noted otherwise, the test method is ASTM.

^cUnits 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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