

Technical Data Sheet

Eastar™ Copolyester GN046

Applications

- Consumer housewares-nfc
- Multi-layer film food contact
- Personal care & cosmetics packaging

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™ Copolyester GN046 is a very high melt strength copolyester targeted for extrusion blow molding applications. Blow molding of large parts (up to several pounds) are possible with this material. This product is certified to ANSI/NSF Standard 51.

This product has been GREENGUARD INDOOR AIR QUALITY CERTIFIED

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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		
Tensile Stress @ Yield	D 638	50 MPa (7300 psi)
Tensile Stress @ Break	D 638	28 MPa (4100 psi)
Elongation @ Yield	D 638	4 %
Elongation @ Break	D 638	110 %
Flexural Modulus	D 790	2100 MPa (3.0 x 10 ⁵ psi)
Flexural Strength	D 790	68 MPa (9900 psi)
Rockwell Hardness, R Scale	D 785	108
Izod Impact Strength, Notched		
@ 23°C (73°F)	D 256	94 J/m (1.8 ft·lbf/in.)
@ -40°C (-40°F)	D 256	53 J/m (1.0 ft·lbf/in.)
Impact Strength, Unnotched		
@ 23°C (73°F)	D 4812	NB
@ -40°C (-40°F)	D 4812	NB

Impact Resistance (Puncture), Energy @ Max. Load		
@ 23°C (73°F)	D 3763	36 J (27 ft·lbf)
@ -40°C (-40°F)	D 3763	35 J (26 ft·lbf)
Optical Properties		
Haze	D 1003	0.6 %
Regular Transmittance	D 1003	87 %
Total Transmittance	D 1003	90 %
Gloss		
@ 60°	D 2457	152
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)
Vicat Softening Temperature		
@ 1 kg load	D 1525	83 °C (181 °F)
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)

^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 typical of average lots. Eastman makes no representation that the material in any particular shipment will conform exactly to the values given.

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