EASTMAN

Technical Data Sheet

Eastman™ DN500 Copolyester

Applications

- Cabinetry
- Caps & lids non-food contact
- Decorative interiors
- Displays/in-store fixtures
- Fibers
- Furniture
- Graphic arts
- Indoor signs
- Industrial
- Lighting
- Point-of-purchase
- Transaction cards
- Visual merchandising
- Woodworking adhesive

Key Attributes

- Ability to mold thick parts
- Ease of processing
- Easy to extrude, cut, decorate, and seal
- Excellent clarity and color
- Excellent colorability
- Good impact strength
- Good stiffness
- High gloss appearance
- Improved gate aesthetics
- Readily fill intricate molds
- Toughness

Product Description

Eastman DN500 copolyester is a high flow product designed and engineered for many different applications. With its excellent color and clarity and its ability to mold thick parts with improved gate aesthetics, DN500 is clearly a well-suited copolyester for many applications. Other outstanding features are excellent chemical resistance, high gloss, and improvements in processing such as faster cycle times, and lower scrap rates. DN500 is also ideally suited for two-shot molding techniques due to its lower processing temperatures, very slow crystallization rate, and flow characteristics.

Typical Properties

Property[a]	Test Method[b]	Typical Value, Units[c]
General Properties		
Specific Gravity	D 792	1.25 g/cm^3
Mold Shrinkage Parallel to Flow, 3.2-mm (0.125-in.) thickness	D 955	0.00450 mm/mm
Mechanical Properties (ISO Method)		
Haze	D 1003	0.55 %
Tensile Strength @ Yield	ISO 527	45 MPa (6526.69 psi)
Tensile Strength @ Break	ISO 527	28.2 MPa (4090.06 psi)
Transmittance	D 1003	90.80 %
Elongation @ Yield	ISO 527	4.9 %
Elongation @ Break	ISO 527	201.7 %
Tensile Modulus	ISO 527	1639.6 MPa (2.38 x 10^5 psi)
Mechanical Properties		
Impact Resistance (Puncture), Energy @ Max. Load @ -40°C (-40°F)	D 3763	48.9 J (36.06 ft·lbf)
Tensile Modulus	D 638	1820 MPa (2.63 x 10^5 psi)
Impact Resistance (Puncture), Energy @ Max. Load @ 23°C (73°F)	D 3763	36.2 J (26.69 ft·lbf)
Tensile Stress @ Break	D 638	50.5 MPa (7527.50 psi)
Tensile Stress @ Yield	D 638	48.0 MPa (6874.79 psi)
Elongation @ Break	D 638	350.4 %

Elongation @ Yield	D 638	4.5 %
Flexural Yield Strength	D 790	68.94 MPa (9998.90 psi)
Flexural Modulus	D 790	1931.4 MPa (2.8 x 10^5 psi)
Rockwell Hardness, R Scale	D 785	102.1
Izod Impact Strength, Notched		
@ 23°C (73°F)	D 256	920 J/m (17.23 ft·lbf/in.)
@ -40°C (-40°F)	D 256	60.9 J/m (1.14 ft·lbf/in.)
Impact Strength, Unnotched		
@ 23°C (73°F)	D 4812	2840.3 J/m (53.21 ft·lbf/in.)
@ -40°C (-40°F)	D 4812	3168.5 J/m (59.36 ft·lbf/in.)
Thermal Properties		
Deflection Temperature		
@ 0.455 MPa (66 psi)	D 648	70.9 °C (159.6 °F)
@ 1.82 MPa (264 psi)	D 648	63.1 °C (145.6 °F)
Typical Processing Conditions		
Drying Temperature		65 °C (149 °F)
Drying Time		8 hrs
Processing Melt Temperature		218-240 °C (424-464 °F)
Mold Temperature		16-38 °C (61-100 °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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