

# Product Data Sheet

## Eastar™ Copolyester DN011

### Application/Uses

- Cosmetic jar caps
- Cosmetic jars
- Displays
- Floor care
- Fragrance caps
- Lipstick containers
- Personal Care and Cosmetics
- Refrigerator interior components

### Product Description

Eastar™ Copolyester DN011 is a brilliantly clear polymer having excellent impact strength, chemical resistance, and low shrinkage rates. Eastar™ Copolyester DN011 contains a mold release.

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### Typical Properties

Property <sup>a</sup>	Test <sup>b</sup> Method	Typical Value, Units <sup>c</sup>
Specific Gravity	D 792	1.23
Mold Shrinkage    Parallel to Flow	D 955	0.002-0.005 mm/mm (0.002-0.005 in./in.)
<b>Mechanical Properties</b>		
Tensile Stress @ Yield	D 638	44 MPa (6300 psi)
Tensile Stress @ Break	D 638	54 MPa (7800 psi)
Elongation @ Yield	D 638	4%
Elongation @ Break	D 638	330%
Tensile Modulus	D 638	1800 MPa (2.6 x 10 <sup>5</sup> psi )
Flexural Modulus	D 790	1800 MPa (2.6 x 10 <sup>5</sup> psi )
Flexural Strength	D 790	66 MPa (9600 psi)
Rockwell Hardness, R Scale	D 785	105
Izod Impact Strength, Notched		
@ 23°C (73°F)	D 256	NB
@ -40°C (-40°F)	D 256	77 J/m (1.4 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	46 J (34 ft·lbf)
@ -40°C (-40°F)	D 3763	46 J (34 ft·lbf)
<b>Thermal Properties</b>		
Deflection Temperature		
@ 0.455 MPa (66 psi)	D 648	73°C (163°F)
@ 1.82 MPa (264 psi)	D 648	64°C (147°F)
<b>Optical Properties</b>		

Haze	D 1003	<1.0%
Regular Transmittance	D 1003	89%
Total Transmittance	D 1003	92%

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)

- <sup>a</sup> Unless noted otherwise, all tests are run at 23°C (73°F) and 50% relative humidity.
- <sup>b</sup> Unless noted otherwise, the test method is ASTM.
- <sup>c</sup> Units 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 to the values given.

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