

Product Data Sheet

Eastar™ Copolyester CN005

Application/Uses

- Compacts
- Cosmetic jar caps
- Cosmetic jars
- Cosmetics/personal care packaging
- Fragrance caps
- Fragrance packaging
- Lip gloss containers
- Lipstick containers
- Personal care bottles

Key Attributes

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

Product Description

Eastar™ CN005 copolyester is a high flow product. It is the first copolyester resin from Eastman that has been designed and engineered specifically for cosmetics packaging applications. With its unsurpassed color and clarity and an unmatched ability to mold thick parts with improved gate aesthetics, Eastar™ CN is clearly the most suited copolyester for premium cosmetics packaging. Other outstanding features of Eastar™ CN are excellent chemical resistance, high gloss, and improvements in processing such as faster drying times, faster cycle times, and lower scrap rates. Eastar™ CN is also ideally suited for two-shot molding techniques due to its lower processing temperatures, very slow crystallization rate, and flow characteristics.

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This product has been CRADLE TO CRADLE CERTIFIED^{cm}

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Typical Properties

Property ^a	Test ^b Method	Typical Value, Units ^c
General Properties		
Specific Gravity	D 792	1.20 g/cm ³
Mold Shrinkage	D 955	0.003 mm/mm
Mechanical Properties		
Tensile Stress @ Yield	D 638	50 MPa (7210 psi)
Tensile Stress @ Break	D 638	35 MPa (6240 psi)
Elongation @ Yield	D 638	4.5%
Elongation @ Break	D 638	193%
Flexural Modulus	D 790	1800 MPa (2.60 x 10 ⁵ psi)
Flexural Strength	D 790	67 MPa (9717 psi)
Rockwell Hardness, R Scale	D 785	105
Izod Impact Strength, Notched		
@ 23°C (73°F)	D 256	70 J/m (1.3 ft·lbf/in.)
@ -40°C	D 256	38 J/m (.70 ft·lbf/in.)
Impact Strength, Unnotched		
@ 23°C (73°F)	D 4812	NB
@ -40°C	D 4812	NB
Impact Resistance (Puncture), Energy @ Max. Load @ 23°C	D 3763	40 J (30 ft lbf/f)
Thermal Properties		
Deflection Temperature		
@ 0.455 MPa (66 psi)	D 648	71°C (160°F)
@ 1.82 MPa (264 psi)	D 648	63°C (145°F)
Optical Properties		
Total Transmittance	D 1003	90%
Haze	D 1003	<.6%
Typical Processing Conditions		
Drying Temperature		60°C (140°F)
Drying Time		2-4 hrs
Processing Melt Temperature		225-245°C (440-470°F)
Mold Temperature		16-50°C (60-120°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.

° Units are in SI or US customary units.

Applications

Compacts, Cosmetic jar caps, Cosmetic jars, Cosmetic/Personal Care packaging, Fragrance packaging, Lipstick/Lip gloss packaging

General

Eastar™ Copolyester CN005 is a high flow product especially suited for thick-walled and two-shot molded applications where extreme clarity and gate aesthetics are important. This high flow product is also well suited for those applications utilizing thin-walled intricate parts. Other outstanding features of Eastar™ Copolyester CN005 are good physical properties, chemical resistance and ease of processing.

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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