

# Eastar™ EN059, Natural

Copolyester  
Eastman Chemical Company

Message:

Tailored to meet the needs of injection-molding market, Eastar™ Copolyesters are clear materials with good mechanical properties and chemical resistance to a variety of substances.

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](http://www.greenguard.org). Choose Eastman Chemical Company under the Manufacturer category and click search to display a list of our products.

General Information			
Features	Good Chemical Resistance		
Uses	Cosmetic Packaging		
	Packaging		
	Personal Care		
	Sporting Goods		
	Toothbrush Handles		
	Toys		
	Writing Instruments		
Appearance	Clear/Transparent		
	Natural Color		
Forms	Pellets		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.33	g/cm <sup>3</sup>	ASTM D792
Molding Shrinkage - Flow	0.20	%	ASTM D955
Water Absorption (23°C, 24 hr)	0.19	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale, 23°C)	111		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638
Yield, 23°C	58.0	MPa	
Break, 23°C	24.0	MPa	
Tensile Elongation			ASTM D638
Yield, 23°C	4.0	%	
Break, 23°C	90	%	
Flexural Modulus (23°C)	2400	MPa	ASTM D790
Flexural Strength (23°C)	78.0	MPa	ASTM D790

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-40°C	33	J/m	
23°C	56	J/m	
Unnotched Izod Impact			ASTM D4218
-40°C	2400	J/m	
23°C	No Break		
Instrumented Dart Impact			ASTM D3763
-40°C, Energy @ Max. Load	38.0	J	
23°C, Energy @ Max. Load	32.0	J	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	69.0	°C	
1.8 MPa, Unannealed	63.0	°C	
Vicat Softening Temperature	80.0	°C	ASTM D1525 <sup>1</sup>
Optical	Nominal Value	Unit	Test Method
Transmittance (Total)	82.0	%	ASTM D1003
Haze	< 1.0	%	ASTM D1003
Injection	Nominal Value	Unit	
Drying Temperature	160	°C	
Drying Time	4.0 to 6.0	hr	
Processing (Melt) Temp	277 to 293	°C	
Mold Temperature	16.0 to 32.0	°C	
NOTE			

1. Loading 1 (10 N)

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#### Recommended distributors for this material

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