# Eastar™ CN005

## Copolyester

### Eastman Chemical Company

#### Message:

Eastar<sup>™</sup> 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<sup>™</sup> CN is clearly the most suited copolyester for premium cosmetics packaging. Other oustanding features of Eastar<sup>™</sup> CN are excellent chemical resistance, high gloss, and improvements in processing such as faster drying times, faster cycle times, and lower scrap rates. Eastar<sup>™</sup> CN is also ideally suited for two-shot molding techniques due to its lower processing temperatures, very slow crystallization rate, and flow characteristics. This product has been GREENGUARD INDOOR AIR QUALITY CERTIFIED<sup>®</sup>.

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<sup>™</sup> Copolyesters, visit www.greenguard.org. Choose Eastman Chemical Company under the Manufacturer category and click search to display a list of our products. This product has been CRADLE TO CRADLE CERTIFIED(cm)

The CRADLE TO CRADLE CERTIFIED(cm) Mark is a registered certification mark used under license through McDonough Braungart Design Chemistry (MBDC). MBDC is a global sustainability consulting and product certification firm. The CRADLE TO CRADLE® framework moves beyond the traditional goal of reducing the negative impacts of commerce ( 'eco-efficiency'), to a new paradigm of increasing its positive impacts ( 'eco-effectiveness'). At its core, Cradle to Cradle design perceives the safe and productive processes of nature's 'biological metabolism' as a model for developing a 'technical metabolism' flow of industrial materials. Product components can be designed for continuous recovery and reutilization as biological and technical nutrients within these metabolisms. For more information about MBDC and to obtain printable certificates for Eastman Copolyesters, visit http://www.mbdc.com.

General Information			
Features	Fast Molding Cycle		
	Good Chemical Resistance		
	Good Colorability		
	Good Impact Resistance		
	Good Processability		
	Good Stiffness		
	Good Toughness		
	High Flow		
	High Gloss		
Uses	Bottles		
	Caps		
	Containers		
	Cosmetics		
	Packaging		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm³	ASTM D792
Molding Shrinkage - Flow	0.30	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale, 23°C)	105		ASTM D785

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638
Yield, 23°C	50.0	MPa	
Break, 23°C	35.0	MPa	
Tensile Elongation			ASTM D638
Yield, 23°C	4.5	%	
Break, 23°C	190	%	
Flexural Modulus (23°C)	1800	MPa	ASTM D790
Flexural Strength (23°C)	67.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-40°C	38	J/m	
23°C	70	J/m	
Unnotched Izod Impact			ASTM D4812
-40°C	No Break		
23°C	No Break		
Instrumented Dart Impact (23°C, Energy at			
Max Load)	40.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	71.0	°C	
1.8 MPa, Unannealed	63.0	°C	
Optical	Nominal Value	Unit	Test Method
Transmittance (Total)	90.0	%	ASTM D1003
Haze	< 0.60	%	ASTM D1003
Injection	Nominal Value	Unit	
Drying Temperature	60.0	°C	
Drying Time	2.0 to 4.0	hr	
Processing (Melt) Temp	225 to 245	°C	
Mold Temperature	16.0 to 50.0	°C	

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#### Recommended distributors for this material

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