Eastar™ GN046

Copolyester

Eastman Chemical Company

Message:

Eastar™ Copolyester GN046 is a very high melt strength copolyester targeted for extrusion blow molding applications. Blow molding of large parts (up to several pounds) are possible with this material. This product is certified to ANSI/NSF Standard 51.
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. 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	
UL YellowCard	E118289-220170
Features	Barrier Resin Excellent Printability Good Chemical Resistance Good Colorability Good Impact Resistance Good Melt Strength Good Stiffness Good Toughness High Clarity High Gloss
Uses	Blow Molding Applications Bottles
Agency Ratings	NSF 51
Forms	Pellets
Processing Method	Extrusion Blow Molding Injection Molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.27	g/cm³	ASTM D792
Molding Shrinkage - Flow (3.20 mm)	0.20 to 0.50	%	ASTM D955

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale, 23°C)	108		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength			ASTM D638
Yield, 23°C	50.0	MPa	
Break, 23°C	28.0	MPa	
Tensile Elongation			ASTM D638
Yield, 23°C	4.0	%	
Break, 23°C	110	%	
Flexural Modulus (23°C)	2100	MPa	ASTM D790
Flexural Strength (23°C)	68.0	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact			ASTM D256
-40°C	53	J/m	
23°C	94	J/m	
Unnotched Izod Impact			ASTM D4218
-40°C	No Break		
23°C	No Break		
Instrumented Dart Impact			ASTM D3763
-40°C, Energy at Peak Load	35.0	J	
23°C, Energy at Peak Load	36.0	J	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	70.0	°C	
1.8 MPa, Unannealed	62.0	°C	
Vicat Softening Temperature	83.0	°C	ASTM D1525 [1]
Optical	**Nominal Value**	**Unit**	**Test Method**
Gloss (60°)	152		ASTM D2457
Transmittance			ASTM D1003
Total	90.0	%	
Regular	87.0	%	
Haze	0.60	%	ASTM D1003
Injection	**Nominal Value**	**Unit**	
Drying Temperature	71.0	°C	
Drying Time	6.0	hr	
Processing (Melt) Temp	249 to 271	°C	
Mold Temperature	16.0 to 38.0	°C	
NOTE			
1.	Loading 1 (10 N)		

Recommended distributors for this material

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