Eastar™ BR203

Copolyester

Eastman Chemical Company

Message:

Eastar™ BR203 Copolyester contains a mold release additive. It has excellent appearance and is nearly water-clear. Its most outstanding features are its chemical resistance and processing capabilities. Exposure to aromatic oils often causes crazing or actual fracture of many polymer resins, but BR203 maintains its physical properties when exposed to these oils, and its appearance is virtually unchanged. BR203 is specifically formulated to provide the optimal combination of chemical resistance, bristle retention, strength, stiffness, toughness, processability, clarity, colorability, and feel for toothbrushes. Under existing United States Food and Drug Administration (FDA) regulations, Eastar™ BR203 copolyester may lawfully be used to make food contact articles which comply with the specifications and conditions of use in 21 CFR 177.1240.
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.

General Information			
Additive	Mold Release		
Features	Food Contact Acceptable Good Chemical Resistance Good Colorability Good Mold Release Good Processability Good Stiffness Good Strength Good Toughness High Clarity Pleasing Surface Appearance		
Uses	Personal Care Toothbrush Handles		
Agency Ratings	FDA 21 CFR 177.1240		
Appearance	Natural Color		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity			
--	1.20	g/cm³	ASTM D792
23°C	1.19	g/cm³	ISO 1183
Molding Shrinkage - Flow (3.20 mm)	0.20 to 0.60	%	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			
Yield, 23°C	46.0	MPa	ASTM D638
Yield, 23°C	47.0	MPa	ISO 527-2
Break, 23°C	53.0	MPa	ASTM D638
Break, 23°C	49.0	MPa	ISO 527-2
Tensile Elongation			
Yield, 23°C	5.0	%	ASTM D638
Yield, 23°C	4.0	%	ISO 527-2
Break, 23°C	310	%	ASTM D638
Break, 23°C	210	%	ISO 527-2
Flexural Modulus			
23°C	1900	MPa	ASTM D790
23°C	1750	MPa	ISO 178
Flexural Stress			
23°C	64.0	MPa	ISO 178
Yield, 23°C	67.0	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact			
-40°C	60	J/m	ASTM D256
23°C	370	J/m	ASTM D256
-40°C	6.3	kJ/m^2	ISO 180
23°C	30	kJ/m^2	ISO 180
Unnotched Izod Impact			ASTM D4218
-40°C	No Break		
23°C	No Break		
Instrumented Dart Impact			
-40°C, Energy at Peak Load	48.0	J	ASTM D3763
23°C, Energy at Peak Load	45.0	J	ASTM D3763
-40°C, Energy to Peak Force	55.0	J	ISO 6603-2
23°C, Energy to Peak Force	71.0	J	ISO 6603-2
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			
0.45 MPa, Unannealed	73.0	°C	ASTM D648, ISO 75-2/B
1.8 MPa, Unannealed	65.0	°C	ASTM D648
1.8 MPa, Unannealed	66.0	°C	ISO 75-2/A
Optical	**Nominal Value**	**Unit**	**Test Method**
Transmittance			ASTM D1003
Regular	89.0	%	
Total	91.0	%	
Haze	0.30	%	ASTM D1003
Injection	**Nominal Value**	**Unit**	

Drying Temperature	70.0	°C
Drying Time	3.0	hr
Processing (Melt) Temp	250 to 290	°C
Mold Temperature	15.0 to 30.0	°C

Recommended distributors for this material

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