

## Eastman Eastar BR001 Copolyester

Category : Polymer , Thermoplastic , Polyester, TP

### Material Notes:

Eastar BR001 Copolyester 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 BR001 maintains its physical properties when exposed to these oils, and its appearance is virtually unchanged. BR001 is specifically formulated to provide the optimal combination of chemical resistance, bristle retention, strength, stiffness, processability, clarity, colorability, and feel for toothbrushes. Under existing United States Food and Drug Administration(FDA) regulations, Eastar BR001 copolyester may lawfully be used to make food contact articles which comply with the specifications and conditions of use in 21 CFR 177.1240(a). Migration tests on BR001 samples meet the compliance requirements of 21 CFR 177.1240(3)(1), (2) and (3).Applications/UsesToothbrushes

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Eastman-Eastar-BR001-Copolyester.php](http://www.lookpolymers.com/polymer_Eastman-Eastar-BR001-Copolyester.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D792
Linear Mold Shrinkage	0.0020 - 0.0060 cm/cm @Thickness 3.20 mm	0.0020 - 0.0060 in/in @Thickness 0.126 in	ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	103	103	ASTM D785
Tensile Strength at Break	51.0 MPa	7400 psi	ASTM D638
Tensile Strength, Yield	47.0 MPa	6820 psi	ASTM D638
Elongation at Break	320 %	320 %	ASTM D638
Elongation at Yield	5.0 %	5.0 %	ASTM D638
Flexural Yield Strength	69.0 MPa	10000 psi	ASTM D790
Flexural Modulus	2.00 GPa	290 ksi	ASTM D790
Izod Impact, Notched	0.400 J/cm @Temperature -40.0 °C	0.749 ft-lb/in @Temperature -40.0 °F	ASTM D256
	0.800 J/cm @Temperature 23.0 °C	1.50 ft-lb/in @Temperature 73.4 °F	ASTM D256
Izod Impact, Unnotched	NB	NB	ASTM D4812
	NB @Temperature -40.0 °C	NB @Temperature -40.0 °F	ASTM D4812

Mechanical Properties	Metric	English	Comments
			Puncture Resistance @ Max Load, 23 °C, ASTM D3763
	48.0 J	35.4 ft-lb	Puncture Resistance at Max Load; ASTM D3763
	@Temperature -40.0 °C	@Temperature -40.0 °F	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	73.0 °C	163 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	65.0 °C	149 °F	ASTM D648

Optical Properties	Metric	English	Comments
Haze	0.30 %	0.30 %	ASTM D1003
Transmission, Visible	89 %	89 %	Regular Transmittance; ASTM D1003
	91 %	91 %	Total Transmittance; ASTM D1003

Processing Properties	Metric	English	Comments
Melt Temperature	230 - 280 °C	446 - 536 °F	
Mold Temperature	15.0 - 30.0 °C	59.0 - 86.0 °F	
Drying Temperature	70.0 °C	158 °F	
Dry Time	3 hour	3 hour	

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China