# Eastar™ BR001

Copolyester

Eastman Chemical Company

## Message:

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).
This product has been GREENGUARD INDOOR AIR QUALITY CERTIFIED®.
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| General Information | |
|---|---|
| Features | Food Contact Acceptable |
| | Good Chemical Resistance |
| | Good Colorability |
| | Good Processability |
| | Good Stiffness |
| | Good Strength |
| | High Clarity |
| | Pleasing Surface Appearance |
| Uses | Personal Care |
| | Toothbrush Handles |
| Agency Ratings | FDA 21 CFR 177.1240(3)(1) |
| | FDA 21 CFR 177.1240(3)(2) |
| | FDA 21 CFR 177.1240(3)(3) |
| | FDA 21 CFR 177.1240(a) |
| Forms | Pellets |

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Specific Gravity | 1.20 | g/cm³ | ASTM D792 |
| 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) | 103 | | ASTM D785 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Strength | | | ASTM D638 |
| Yield, 23°C | 47.0 | MPa | |

| | | | |
|---|---|---|---|
| Break, 23°C | 51.0 | MPa | |
| Tensile Elongation | | | ASTM D638 |
| Yield, 23°C | 5.0 | % | |
| Break, 23°C | 320 | % | |
| Flexural Modulus (23°C) | 2000 | MPa | ASTM D790 |
| Flexural Strength (Yield, 23°C) | 69.0 | MPa | ASTM D790 |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Notched Izod Impact | | | ASTM D256 |
| -40°C | 40 | J/m | |
| 23°C | 80 | 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 | 48.0 | J | |
| 23°C, Energy at Peak Load | 42.0 | J | |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Deflection Temperature Under Load | | | ASTM D648 |
| 0.45 MPa, Unannealed | 73.0 | °C | |
| 1.8 MPa, Unannealed | 65.0 | °C | |
| **Optical** | **Nominal Value** | **Unit** | **Test Method** |
| Transmittance | | | ASTM D1003 |
| Total | 91.0 | % | |
| Regular | 89.0 | % | |
| Haze | 0.30 | % | ASTM D1003 |
| **Injection** | **Nominal Value** | **Unit** | |
| Drying Temperature | 70.0 | °C | |
| Drying Time | 3.0 | hr | |
| Processing (Melt) Temp | 230 to 280 | °C | |
| Mold Temperature | 15.0 to 30.0 | °C | |



Recommended distributors for this material

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