

# Technical Data Sheet

## Eastar™ Copolyester BR003 Natural

### Applications

- Oral hygiene

### Product Description

Eastar™ BR003 copolyester contains an additive that provides optimum molding efficiency. It has excellent appearance and is nearly water clear. With superior chemical resistance, it maintains its physical properties and appearance when exposed to aromatic oils. BR003 is specifically formulated to provide the optimal combination of chemical resistance, bristle retention, strength, stiffness, processability, clarity, colorability, and feel for toothbrushes. It also offers greater design flexibility and can work for virtually any toothbrush configuration; as a result, brands can offer unique models that are tough to replicate—and launch them quicker. With BR003, molders can also consolidate resins versus having single resins for single designs. Under existing United States Food and Drug Administration (FDA) regulations, Eastar™ BR003 copolyester may lawfully be used to make food contact articles which comply with the specifications and conditions of use in 21 CFR 177.1240. Migration tests on BR003 samples meet the compliance requirements of 21 CFR 177.1240(e)(1),(2) and (3).

This product has been GREENGUARD INDOOR AIR QUALITY CERTIFIED®.

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### Typical Properties

Property <sup>a</sup>	Test Method <sup>b</sup>	Typical Value, Units <sup>c</sup>
<b>Mechanical Properties</b>		
Flexural Modulus	D 790	2000 MPa (2.9 x 10 <sup>5</sup> psi)
Rockwell Hardness, R Scale	D 785	103
Izod Impact Strength, Notched		
@ 23°C (73°F)	D 256	80 J/m (1.5 ft·lbf/in.)
@ -40°C (-40°F)	D 256	40 J/m (0.7 ft·lbf/in.)
<b>Optical Properties</b>		
Haze	D 1003	0.3 %
Total Transmittance		91 %
<b>Other Properties</b>		
Bio-based Content		0 %
<b>Thermal Properties</b>		
Crystallization half time		33 min.
<b>Typical Processing Conditions</b>		
Drying Temperature		70 °C (160 °F)
Drying Time		3 hrs
Processing Melt Temperature		230-280 °C (450-530 °F)
Mold Temperature		15-30 °C (60-80 °F)

<sup>a</sup>Unless noted otherwise, all tests are run at 23°C (73°F) and 50% relative humidity.

<sup>b</sup>Unless noted otherwise, the test method is ASTM.

<sup>c</sup>Units are in SI or US customary units.

## General

Properties reported here are typical of average lots. Eastman makes no representation that the material in any particular shipment will conform exactly to the values given.

## Comments

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