EASTMAN

Technical Data Sheet

Eastman Tritan[™] Copolyester TX1800

Applications

- Appliances (food contact)
- Automotive parts & accessories
- Blow molding
- Building materials
- Commercial housewares
- Consumer housewares food contact (fc)
- Consumer housewares-nfc
- Equipment & machinery
- Fruit juice drinks packaging
- Home, garden & automotive packaging
- Lighting
- Milk packaging
- Packaging components non food contact
- Point-of-purchase
- Profiles
- Small appliances non-food contact
- Sporting equipment
- Water/sport bottles

Product Description

Eastman Tritan[™] Copolyester TX 1800 is an amorphous copolyester specifically developed for use in blow molding and profile extrusion applications. Its most outstanding features are excellent toughness, hydrolytic stability, heat resistance, and chemical resistance. In addition, this new generation copolyester offers excellent appearance and clarity. Eastman Tritan[™] Copolyester TX1800 may be used in repeated use food contact articles under United States Food and Drug Administration (FDA) regulations.

This product is certified to NSF/ANSI Standard 51 for Food Equipment Materials.

This product has been *CRADLE TO CRADLE CERTIFIED*TM Bronze, with Material Health Certificate, Platinum. The *CRADLE TO CRADLE CERTIFIED* mark is a registered certification mark used under license through the Cradle to Cradle Products Innovation Institute, a nonprofit organization that administers the publicly available *Cradle to Cradle Certified* Product Standard which provides designers and manufacturers with criteria and requirements

for continually improving product materials and manufacturing processes. The *Cradle to Cradle Certified*TM Product Standard guides designers and manufacturers through a continual improvement process that looks at a product through five quality categories—material health, material reutilization, renewable energy and carbon management, water stewardship, and social fairness. A product receives an achievement level in each category—Basic, Bronze, Silver, Gold, or Platinum—with the lowest achievement level representing the product's overall mark.

The Material Health Certificate provides manufacturers with a trusted way to communicate their efforts to identify and replace chemicals of concern in their products. For more information about Cradle to Cradle certification and to obtain printable certificates for Eastman copolyesters, visit <u>www.cn-plas.com</u>. Search for Eastman Chemical Company in *Cradle to Cradle Certified* Products Registry.

Typical Properties

Property ^a	Test Method ^b	Typical Value, Units ^C
General Properties		
Specific Gravity	D 792	1.18
Mold Shrinkage	D 955	0.006 mm/mm (0.006 in./in.)
Mechanical Properties (ISO Method)		

Key Attributes

- Ease of processing
- Excellent clarity
- Excellent hydrolytic stability
- Good chemical resistance
 - Good heat resistance
 - Outstanding impact resistance



Tensile Stress @ Break ISO 527 51 MPa Elongation @ Yield ISO 527 7 % Elongation @ Break ISO 527 142 % Tensile Modulus ISO 527 169 MPa Flexural Modulus ISO 527 169 MPa Flexural Strength ISO 178 1494 MPa Izod Impact Strength, Notched 0 23°C ISO 180 78 kJ/m ⁴ @ 40°C ISO 180 78 kJ/m ⁴ Mechanical Properties 12 kJ/m ⁴ Tensile Stress @ Ireak D 638 52 MPa (7600 psi) 150 psi) 150 psi) Elongation @ Ireak D 638 139 % 150 psi) 1522 MPa (2.3x10 ³ psi) Flexural Modulus D 638 1609 MPa (2.3x10 ³ psi) 151 psi) 152 MPa (2.2x10 ³ psi) Flexural Modulus D 790 1522 MPa (3.2x10 ³ psi) 152 MPa (2.2x10 ³ psi) 152 MPa (2.2x10 ³ psi) Flexural Modulus D 790 64 MPa (9300 psi) Rockwell Hardness, R Scale D 785 110 Izod Impact Strength, Notched @ 23°C (73°F) D 256 Med (4 fr-lbf) @ 23°C (73°F) D 3763 <th>Tensile Strength @ Yield</th> <th>ISO 527</th> <th>45 MPa</th>	Tensile Strength @ Yield	ISO 527	45 MPa
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a Unless noted otherwise, all tests are run at 23°C (73°F) and 50% relative humidity. b Unless noted otherwise, the test method is ASTM.

c Units are in SI or US customary units.

Comments

Properties reported here are based on limited testing of Tritan TX1800. Eastman makes no representation that the material in any particular shipment will conform exactly to the values given.

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