

Technical Data Sheet

Eastman Tritan™ Copolyester TX2001

Applications

- Appliances (food contact)
- Auto plastics
- Automotive
- Commercial housewares
- Compounders
- Consumer electronics
- Consumer housewares - food contact (fc)
- Consumer housewares-nfc
- Device housings
- Large appliances non-food contact
- Lighting
- Non-kitchen appliances
- Ophthalmics
- Outdoor signs
- Packaging components non food contact
- Personal care & cosmetics packaging
- Process additives
- Small appliances non-food contact
- Tools
- Toys
- Water/sport bottles

Key Attributes

- Ease of processing
- Excellent clarity
 - Excellent hydrolytic stability
- Fast drying times
 - Good chemical resistance
- Good heat resistance
 - Outstanding impact resistance
- Quick cycle times

Product Description

Eastman Tritan™ TX2001 is an amorphous copolyester with excellent appearance and clarity. Tritan™ TX2001 contains a mold release derived from vegetable based sources. Its most outstanding features are excellent toughness, hydrolytic stability, and heat and chemical resistance. This new-generation copolyester can also be molded into various applications without incorporating high levels of residual stress. Combined with Tritan™ copolyester's outstanding chemical resistance and hydrolytic stability, these features give molded products enhanced durability in the dishwasher environment, which can expose products to high heat, humidity, and aggressive cleaning agents. Tritan™ TX2001 copolyester may be used in repeated use food contact articles under United States Food and Drug Administration (FDA) regulations. Tritan™ TX2001 copolyester is certified to NSF/ANSI Standard 51 for Food Equipment Materials and is also certified to NSF/ANSI Standard 61 – Drinking Water System Components-Health Effects.

Typical Properties

Property ^a	Test Method ^b	Typical Value, Units ^c
General Properties		
Specific Gravity	D 792	1.17
Mold Shrinkage	D 955	0.005-0.007 mm/mm (0.005-0.007 in./in.)
Mechanical Properties (ISO Method)		
Tensile Strength @ Yield	ISO 527	45 MPa
Tensile Stress @ Break	ISO 527	49 MPa
Elongation @ Yield	ISO 527	7 %
Elongation @ Break	ISO 527	130 %
Tensile Modulus	ISO 527	1624 MPa
Flexural Modulus	ISO 178	1531 MPa
Izod Impact Strength, Notched		
@ 23°C	ISO 180	66 kJ/m ²

@ -40°C	ISO 180	14 kJ/m ²
Mechanical Properties		
Tensile Stress @ Yield	D 638	44 MPa (6400 psi)
Tensile Stress @ Break	D 638	53 MPa (7700 psi)
Elongation @ Yield	D 638	7 %
Elongation @ Break	D 638	140 %
Tensile Modulus	D 638	1585 MPa (2.28 x 10 ⁵ psi)
Flexural Modulus	D 790	1585 MPa (2.28 x 10 ⁵ psi)
Flexural Yield Strength	D 790	66 MPa (9600 psi)
Rockwell Hardness, R Scale	D 785	115
Izod Impact Strength, Notched @ 23°C (73°F)	D 256	650 J/m (12.2 ft·lbf/in.)
Impact Strength, Unnotched @ 23°C (73°F)	D 4812	NB
Optical Properties		
Total Transmittance	D 1003	92 %
Haze	D 1003	<1 %
Thermal Properties		
Deflection Temperature @ 0.455 MPa (66 psi)	D 648	109 °C (228 °F)
@ 1.82 MPa (264 psi)	D 648	92 °C (198 °F)
Typical Processing Conditions		
Drying Temperature		88 °C (190 °F)
Drying Time		4-6 hrs
Processing Melt Temperature		260-282 °C (500-540 °F)
Mold Temperature		38-66 °C (100-150 °F)

^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. Eastman makes no representation that the material in any particular shipment will conform exactly to the values given.

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