

Technical Data Sheet

Eastman Tritan™ Copolyester TX1501HF

Applications

- Appliances (food contact)
- Auto plastics
- Baby bottles/sippy cups
- Building materials
- Commercial housewares
- Compounders
- Consumer electronics
- Consumer housewares - food contact (fc)
- Consumer housewares-nfc
- Equipment & machinery
- Filtration
- Large appliances non-food contact
- Lighting
- Multi-layer film non food contact
- Non-kitchen appliances
- Non-medical housings & hardware for elec
- Ophthalmics
- Outdoor signs
- Packaging components non food contact
- Point-of-purchase
- Process additives
- Profiles
- Safety glasses/shield
- Signs
- Small appliances non-food contact
- Sporting equipment
- Tools
- Toys
- Transaction cards
- Water/sport bottles

Key Attributes

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

Product Description

Eastman Tritan™ copolyester TX1501HF is a high flow grade of Eastman Tritan™. Eastman Tritan™ copolyester TX1501HF has viscosity reductions of 40-50% relative to Eastman Tritan™ copolyester TX1001. Eastman Tritan™ copolyester TX1501HF contains a mold release derived from vegetable based sources. Other outstanding features include good toughness, hydrolytic stability, and heat and chemical resistance. Eastman Tritan™ copolyester TX1501HF may be used in repeated use food contact articles under United States Food and Drug Administration (FDA) regulations. Eastman Tritan™ copolyester TX1501HF 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	1.18
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	44 MPa
Tensile Strength @ Break	ISO 527	49 MPa
		7 %

Elongation @ Yield	ISO 527	
Elongation @ Break	ISO 527	154 %
Tensile Modulus	ISO 527	1604 MPa
Flexural Modulus	ISO 178	1502 MPa
Flexural Strength	ISO 178	60 MPa
Izod Impact Strength, Notched		
@ 23°C	ISO 180	83 kJ/m ²
@ -40°C	ISO 180	11 kJ/m ²
Mechanical Properties		
Tensile Stress @ Yield	D 638	43 MPa (6200 psi)
Tensile Stress @ Break	D 638	52 MPa (7500 psi)
Elongation @ Yield	D 638	7 %
Elongation @ Break	D 638	210 %
Tensile Modulus	D 638	1575 MPa (2.28 x 10 ⁵ psi)
Flexural Modulus	D 790	1575 MPa (2.28 x 10 ⁵ psi)
Flexural Yield Strength	D 790	64 MPa (9300 psi)
Rockwell Hardness, R Scale	D 785	111
Izod Impact Strength, Notched		
@ 23°C (73°F)	D 256	860 J/m (16.1 ft·lbf/in.)
Impact Strength, Unnotched		
@ 23°C (73°F)	D 4812	NB
Optical Properties		
Total Transmittance	D 1003	91 %
Haze	D 1003	<1 %
Thermal Properties		
Deflection Temperature		
@ 0.455 MPa (66 psi)	D 648	94 °C (201 °F)
@ 1.82 MPa (264 psi)	D 648	81 °C (178 °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)

^aUnless noted otherwise, all tests are run at 23°C (73°F) and 50% relative humidity.

^bUnless noted otherwise, the test method is ASTM.

^cUnits 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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