EASTMAN

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
- Device housings
- Equipment & machinery
- Filtration
- Large appliances non-food contact
- Lighting
- Multi-layer film non food contact
- Non-kitchen appliances
- 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)

[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.