

Technical Data Sheet

Eastman Tritan™ copolyester TX1500HF

Applications

- Building materials
- Compounders
- Consumer housewares-nfc
- Large appliances non-food contact
- Packaging components non food contact
- Safety glasses/shield
- Small appliances non-food contact
- 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™ TX1500HF copolyester is a high flow grade of Eastman Tritan. Tritan TX1500HF has viscosity reductions of 40-50% relative to Tritan TX1000. Other outstanding features include good toughness, hydrolytic stability, and heat and chemical resistance. Tritan TX1500HF may be used in repeated use food contact articles under United States Food and Drug Administration (FDA) regulations. Tritan TX1500HF is certified to NSF/ANSI Standard 51 for Food and Equipment Materials.

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
Elongation @ Yield	ISO 527	7 %
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.

Technical Disclaimer

Eastman makes no representation and disclaims any warranty that the material in any particular shipment will conform exactly to the values given. Values as well as the performance of the final molded article may be affected by various factors such as the part design, mold design or tooling, drying, processing conditions as well as coloring or pigmentation of the product. No warranty of merchantability or fitness for use is made, and nothing herein waives any of the Seller's conditions of sale. You must make your own determination of the suitability of this product in your specific application due to the many factors (e.g. design, processing and conditions of use) that affect the performance of the final molded article. Suitability of use should be evaluated with appropriate testing and analysis. The processing melt temperature and mold temperature refer to the actual resin melt temperature and actual mold surface temperature respectively. Consider overall resin residence time, part shot size utilization and part geometry to set appropriate processing melt temperature and mold temperature in order to minimize IV loss and maximize molded part performance.

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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