

Technical Data

Product Description

Eastman Tritan™ TX1001 is an amorphous copolyester with excellent appearance and clarity. Tritan TX1001 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'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 detergents. Tritan TX1001 may be used in repeated use food contact articles under United States Food and Drug Administration (FDA) regulations. Tritan TX1001 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.

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

Applications

- Appliances (food contact)
- Automotive
- Chocolate molds
- Commercial housewares
- Compounds
- Consumer electronics
- Consumer housewares - food contact (FC)
- Consumer housewares-NFC
- Displays/in-store fixtures
- Electronic packaging
- Equipment & machinery
- Eyewear
- Filtration
- Industrial
- Large appliances non-food contact
- Lighting
- Non-kitchen appliances
- Non-medical housings & hardware for elec
- Outdoor signs
- Packaging components non food contact
- Packaging tape
- Personal care & cosmetics packaging
- Personal care bottles
- Personal care packaging
- Point-of-purchase
- Protective & performance film
- Small appliances non-food contact
- Sporting equipment
- Tools
- Toys
- Water/sport bottles



General

Material Status	• Commercial: Active		
Literature ¹	• Processing - Injection Molding Guide (English) • Technical Datasheet (English)		
UL Yellow Card ²	• E118289-100074991		
Search for UL Yellow Card	• Eastman Chemical Company • Tritan™		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• Mold Release		
Features	• Amorphous • Chemical Resistant • Durable • Fast Molding Cycle • Food Contact Acceptable	• Good Heat Resistance • Good Mold Release • Good Processability • High Clarity • High Impact Resistance	• High Toughness • Hydrolytically Stable • Pleasing Surface Appearance
Uses	• Appliances • Automotive Applications • Consumer Applications • Displays • Eyeglass Frames	• Eyeglasses • Household Goods • Housings • Lighting Applications • Molds/Dies/Tools	• Packaging • Personal Care • Sporting Goods • Tape • Toys
Agency Ratings	• FDA Food Contact	• NSF STD-51	• NSF STD-61

Physical	Nominal Value Unit	Test Method
Density / Specific Gravity	1.18 g/cm ³	ASTM D792
Molding Shrinkage - Flow (23°C)	0.50 to 0.70 %	ASTM D955

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus (23°C)	1550 MPa	ASTM D638 ISO 527-1
Tensile Strength		
Yield, 23°C	43.0 MPa	ASTM D638 ISO 527-2
Break, 23°C	53.0 MPa	ASTM D638
Break, 23°C	58.0 MPa	ISO 527-2
Tensile Elongation		
Yield, 23°C	6.0 %	ASTM D638
Yield, 23°C	7.0 %	ISO 527-2
Break, 23°C	210 %	ASTM D638
Break, 23°C	190 %	ISO 527-2
Flexural Modulus		
23°C	1550 MPa	ASTM D790
23°C	1500 MPa	ISO 178
Flexural Stress		
23°C	59.0 MPa	ISO 178
Yield, 23°C	62.0 MPa	ASTM D790

Impact	Nominal Value Unit	Test Method
Notched Izod Impact		
23°C	980 J/m	ASTM D256
-40°C	20 kJ/m ²	ISO 180
23°C	93 kJ/m ²	ISO 180
Unnotched Izod Impact (23°C)	No Break	ASTM D4812



Hardness	Nominal Value Unit	Test Method
Rockwell Hardness (R-Scale, 23°C)	112	ASTM D785
Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load		ASTM D648
0.45 MPa, Unannealed	99.0 °C	
1.8 MPa, Unannealed	85.0 °C	
Optical	Nominal Value Unit	Test Method
Light Transmittance (Total)	90.0 %	ASTM D1003
Haze	< 1.00 %	ASTM D1003
Injection	Nominal Value Unit	
Drying Temperature	88 °C	
Drying Time	4.0 to 6.0 hr	
Processing (Melt) Temp	260 to 282 °C	
Mold Temperature	38 to 66 °C	

Notes

- ¹ These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.
- ² A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.
- ³ Typical properties: these are not to be construed as specifications.

