

Tritan™ MX711

Copolyester

Eastman Chemical Company

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Technical Data

Product Description

Eastman Tritan™ MX711 copolyester is an amorphous product with excellent appearance and clarity. Tritan MX711 contains a mold release derived from vegetable based sources. Tritan MX711 has many outstanding features that include excellent toughness, hydrolytic stability, heat resistance, and chemical resistance. Tritan MX711 has been formulated for medical devices. Tritan MX711 has been tested for FDA/ISO 10993 and USP Class VI Biological Evaluation testing after Gamma and ETO sterilization.

Key Attributes

- Excellent clarity
- Excellent hydrolytic stability
- Fast cycle times
- Fast drying times
- Good chemical resistance
- Good color stability upon ETO sterilization
- Good color stability upon gamma sterilization
- Good heat resistance
- Improved processability over traditional copolyesters
- Outstanding impact resistance

Applications

- Blood contact and dialysis
- Blood tubes
- Fluid administration
- Medical devices
- Medical equipment
- Medical labware

General

Material Status	• Commercial: Active		
Literature ¹	• Technical Datasheet (English)		
UL Yellow Card ²	• E118289-104552388		
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 • Ethylene Oxide Sterilizable • Fast Molding Cycle • Good Color Stability	• Good Heat Resistance • Good Mold Release • Good Processability • High Clarity • High Impact Resistance	• High Toughness • Hydrolytically Stable • Pleasing Surface Appearance • Radiation Sterilizable
Uses	• Fluid Handling • Labware	• Medical Devices • Medical/Healthcare Applications	• Tubing
Agency Ratings	• ISO 10993	• USP Class VI	

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



Mechanical	Nominal Value Unit	Test Method
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		
Notched Izod Impact		
-40°C	110 J/m	ASTM D256
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		
-40°C	No Break	ASTM D4812
23°C	No Break	
Instrumented Dart Impact		
-40°C, Energy at Peak Load	66.0 J	ASTM D3763
23°C, Energy at Peak Load	61.0 J	
Hardness		
Rockwell Hardness (R-Scale, 23°C)	112	ASTM D785
Thermal		
Deflection Temperature Under Load		
0.45 MPa, Unannealed	99.0 °C	ASTM D648
1.8 MPa, Unannealed	85.0 °C	
Optical		
Light Transmittance (Total)	90.0 %	ASTM D1003
Haze	< 1.00 %	ASTM D1003
Injection		
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.

