

# Technical Data Sheet

## Eastman Tritan™ Copolyester MX811

### Applications

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

### 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

### Product Description

Eastman Tritan™ MX811 is an amorphous copolyester with excellent appearance and clarity. Tritan MX811 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. Eastman™ Copolyester MX811 has been formulated for medical devices. Eastman Tritan™ Copolyester MX811 has been tested for FDA/ISO 10993 and USP Class VI Biological Evaluation testing after Gamma and ETO sterilization.

### Typical Properties

Property <sup>a</sup>	Test Method <sup>b</sup>	Typical Value, Units <sup>c</sup>
<b>General Properties</b>		
Specific Gravity	D 792	1.17
Mold Shrinkage	D 955	0.005-0.007 mm/mm (0.005-0.007 in./in.)
<b>Mechanical Properties</b>		
Tensile Stress @ Yield	D 638	44 MPa (6400 psi)
Tensile Stress @ Break	D 638	53 MPa (7700 psi)
Elongation @ Yield	D 638	7 %
Elongation @ Break	D 638	140 %
Tensile Modulus	D 638	1585 MPa (2.28 x 10 <sup>5</sup> psi)
Flexural Modulus	D 790	1585 MPa (2.28 x 10 <sup>5</sup> psi)
Flexural Yield Strength	D 790	66 MPa (9600 psi)
Rockwell Hardness, R Scale	D 785	115
Izod Impact Strength, Notched @ 23°C (73°F)	D 256	650 J/m (12.2 ft·lbf/in.)
Impact Strength, Unnotched @ 23°C (73°F)	D 4812	NB
<b>Optical Properties</b>		
Total Transmittance	D 1003	92 %
Haze	D 1003	<1 %
<b>Thermal Properties</b>		
Deflection Temperature @ 0.455 MPa (66 psi)	D 648	109 °C (228 °F)
@ 1.82 MPa (264 psi)	D 648	92 °C (198 °F)
<b>Typical Processing Conditions</b>		
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)

<sup>a</sup>Unless noted otherwise, all tests are run at 23°C (73°F) and 50% relative humidity.

<sup>b</sup>Unless noted otherwise, the test method is ASTM.

<sup>c</sup>Units are in SI or US customary units.

## Eastman Medical Disclaimer

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## 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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