

# Technical Data Sheet

## Eastman Tritan™ Copolyester MX730

### Applications

- Blood therapy
- Medical labware
- Rigid medical packaging

### 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
- Good melt flowability
- Good toughness
- Improved processability over traditional copolyesters

### Product Description

Eastman Tritan™ Copolyester MX730 is an amorphous product with excellent appearance and clarity. Eastman Tritan™ Copolyester MX730 is a high flow medical grade of Eastman Tritan™ that has viscosity reductions of 40-50% relative to Eastman Tritan™ Copolyester MX710. Eastman Tritan™ Copolyester MX730 has many outstanding features that include excellent toughness, hydrolytic stability, heat resistance, chemical resistance, and melt flowability. Eastman Tritan™ Copolyester MX730 has been formulated for medical devices. Eastman Tritan™ Copolyester MX730 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	1.18
Mold Shrinkage	D 955	0.005-0.007 mm/mm (0.005-0.007 in./in.)
<b>Mechanical Properties (ISO Method)</b>		
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 <sup>2</sup>
@ -40°C	ISO 180	11 kJ/m <sup>2</sup>
<b>Mechanical Properties</b>		
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 <sup>3</sup> psi)
Flexural Modulus	D 790	1575 MPa (2.28 x 10 <sup>3</sup> 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
<b>Optical Properties</b>		
Total Transmittance	D 1003	91 %
Haze	D 1003	<1 %
<b>Thermal Properties</b>		
Deflection Temperature @ 0.455 MPa (66 psi)	D 648	94 °C (201 °F)
@ 1.82 MPa (264 psi)	D 648	81 °C (178 °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.

## 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.

## Eastman Medical Disclaimer

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