



# Product Data Sheet

## Eastman Tritan™ Copolyester MX730

### Application/Uses

- Blood Contact
- IV Components

### 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 <sup>b</sup> Method | 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</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>5</sup> psi ) |
| Flexural Modulus                            | D 790  | 1575 MPa (2.28 x 10 <sup>5</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                                     |

### 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 <sup>2</sup> |
| @ -40°C                              | ISO 180 | 11 kJ/m <sup>2</sup> |

### 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) |

### Optical Properties

|                     |        |     |
|---------------------|--------|-----|
| Total Transmittance | D 1003 | 91% |
| Haze                | D 1003 | <1% |

### 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)   |

<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

It is the responsibility of the medical device manufacturer ("Manufacturer") to determine the suitability of all component parts and raw materials, including any Eastman product, used in

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