

Eastman TRITAN™

copolyester

Enhanced capability injection molding material

Eastman Tritan™ copolyester provides customers a clear polymer product with a balance of performance and processability. This balance helps Tritan create exciting opportunities to differentiate your products through lasting aesthetic appeal and value. Some advantages include excellent toughness, chemical resistance, higher temperature resistance, low and stable shrinkage rates. Mold release and nonmold release versions are available as well as colors and UV additives.

- Excellent chemical resistance
- Excellent toughness
- Ease of processing
 - Easy-dry resin
 - Improved cycle time
 - Same mold shrinkage value as polycarbonate
- Good optical properties
- Higher temperature resistance
- Performs well in secondary operations

Basic properties

Property	ASTM method	Eastman Tritan™ copolyester	
		MX710 and MX711	MX810 and MX811
Specific gravity	D792	1.18	1.17
Mold shrinkage, in./in. or mm/mm	D955	0.005–0.007	0.005–0.007
Tensile stress @ yield, psi (MPa)	D638	6,200 (43)	6,400 (44)
Tensile stress @ break, psi (MPa)	D638	7,700 (53)	7,700 (53)
Elongation @ tensile break, %	D638	210	140
Flexural modulus, psi (MPa)	D790	225,000 (1,550)	228,000 (1,585)
Rockwell hardness, R scale	D785	112	115
Notched Izod impact strength @ 23°C (73°F), ft-lb/in. (J/m)	D256	18.4 (980)	12.2 (650)
Notched Izod impact strength @ –40°C (–40°F), ft-lb/in. (J/m)	D256	2.1 (110)	2.4 (126)
Deflection temperature @ 66 psi (0.455 MPa), °C (°F)	D648	99 (210)	109 (228)
Deflection temperature @ 264 psi (1.82 MPa), °C (°F)	D648	85 (185)	92 (198)

Suggested drying and processing conditions

Drying conditions	
Drying temperature, °C (°F)	88 (190)
Drying time, hr	4
Dryer air dew point, °C (°F)	< –29 (< –20)
Machine conditions	
Injection speed	slow
Screw speed, rpm	30–60
Pack and hold pressure, MPa	35–50
Cushion, in.	0.2–0.4
Back pressure, MPa	10–15

Processing temperatures	
Zones, °C (°F)	
Rear	Set barrel temperatures to reach target melt temperature, up to 10°–20°C (20°–40°F) below target depending on shear heating.
Center	
Front	
Nozzle, °C (°F)	282 (540)
Hot runners, °C (°F)	282 (540)
Melt temperature, °C (°F)	282 ± 10 (540 ± 20)
Mold temperature, °C (°F)	38°–66°C (100°–150°F)



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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 its final product to ensure safety and compliance with requirements of the United States Food and Drug Administration (FDA) or other international regulatory agencies.

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