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Eastman Tritan™ copolyester
Transparent in-mold decoration applications

Eastman Tritan™ copolyester

- Tritan is an innovative, new-generation copolyester that retains the versatility of traditional copolyesters while offering higher temperature performance and impact resistance. The unique properties of Tritan deliver advantages over other clear thermoplastics.
- Functional attributes of Eastman Tritan™ copolyester:
  - Toughness
  - Clarity
  - Excellent chemical resistance
  - Lower melt processing temperature
  - Good adhesion to ink/films
  - Low levels of residual stress
  - Can be a drop-in replacement for PC, PMMA, and PC/polyester with minor or no modifications

In-mold decoration (IMD)

- The IMD process is a versatile and economic method of decorating and manufacturing higher value durable plastic parts. In products such as mobile phones, appliances, and medical devices. Generally, IMD is used to produce thin-wall lenses, windows, or covers. For such applications, a clear plastic substrate is molded behind a decorative film or foil. Tritan represents a compelling new option for the substrate material.

Striking a balance

- As evidenced by the data below, all materials come with tradeoffs. Tritan, however, represents a unique balance of properties. Tritan offers good clarity, toughness, chemical resistance and flow but with melt temperature sufficiently cool enough to avoid ink washout.
- Tritan offers this at a cost generally lower than some blended material options.
- Tritan boasts inherently low levels of residual stress which suggests it's well-suited for complex designs and shapes.

A new substrate option

Data suggests that Tritan may be an attractive option that eliminates some of the compromises that are unavoidable with materials such as PMMA, PC and PC/polyester.

Material	Impact resistance, notched Izod (J/m)[a]	Light transmission (%)[b]	Melt processing temp (°C)[c]	Cost
Eastman Tritan™ copolyester	**980**	**91**	**280**	**$$**
Polycarbonate	800	87	290	$$
PC/polyester	830	88	260	$$$
Transparent ABS	100	86	230	$
PMMA	60	91	240	$

The values presented above for materials other than Tritan are representative of given classes of material and are not intended to represent the performance of a specific product.

[a] *ASTM D256 @ 23°C*

[b] *ASTM D1003*

[c] *General recommendations for material type*

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