

Eastman Tritan™ copolyester for transparent in-mold decoration applications

Eastman Tritan™ copolyester

- Eastman 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 the 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. Eastman Tritan™ copolyester represents a compelling new option for the substrate material.

Striking a balance

- As evidenced by the data below, all materials come with tradeoffs. Eastman Tritan™ copolyester, 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 Eastman Tritan™ copolyester 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) ¹	Light transmission (%) ²	Melt processing temp (°C) ³	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 value 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.

¹ASTM D256 @ 23°C

²ASTM D1003

³General recommendations for material type



**Eastman Chemical Company
Corporate Headquarters**

P.O. Box 431
Kingsport, TN 37662-5280 U.S.A.

Telephone:
U.S.A. and Canada, 800-EASTMAN (800-327-8626)
Other Locations, (1) 423-229-2000
Fax: (1) 423-229-1193

Eastman Chemical Latin America

9155 South Dadeland Blvd.
Suite 1116
Miami, FL 33156 U.S.A.

Telephone: (1) 305-671-2800
Fax: (1) 305-671-2805

Eastman Chemical B.V.

Fascinatia Boulevard 602-614
2909 VA Capelle aan den IJssel
The Netherlands

Telephone: (31) 10 2402 111
Fax: (31) 10 2402 100

**Eastman (Shanghai) Chemical
Commercial Company, Ltd. Jingan Branch**

1206, CITIC Square
No. 1168 Nanjing Road (W)
Shanghai 200041, P.R. China

Telephone: (86) 21 6120-8700
Fax: (86) 21 5213-5255

Eastman Chemical Japan, Ltd.

ALG Aoyama Building 5F
2-11-16 Minami Aoyama
Minato-ku, Tokyo 107-0062 Japan

Telephone: (81) 3-3475-9510
Fax: (81) 3-3475-9515

Eastman Chemical Asia Pacific Pte. Ltd.

#05-04 Winsland House
3 Killiney Road
Singapore 239519

Telephone: (65) 6831-3100
Fax: (65) 6732-4930

www.eastman.com

The results of insight™

Material Safety Data Sheets providing safety precautions, that should be observed when handling and storing Eastman products, are available online or by request. You should obtain and review the available material safety information before handling any of these products. If any materials mentioned are not Eastman products, appropriate industrial hygiene and other safety precautions recommended by their manufacturers should be observed.

Neither Eastman Chemical Company nor its marketing affiliates shall be responsible for the use of this information, or of any product, method or apparatus mentioned, and you must make your own determination of its suitability and completeness for your own use, for the protection of the environment and for the health and safety of your employees and purchasers of your products. NO WARRANTY IS MADE OF THE MERCHANTABILITY OR FITNESS OF ANY PRODUCT, AND NOTHING HEREIN WAIVES ANY OF THE SELLER'S CONDITIONS OF SALE.

Eastman, The results of insight, and Tritan are trademarks of Eastman Chemical Company.

All other brands are the property of their respective owners.

© Eastman Chemical Company, 2010.