

# Optimized injection molding for safety shields

Tenite™ cellulose acetate propionate (CAP) is an injection molding grade of cellulosic esters that provides clarity, impact resistance, and chemical resistance for safety shield applications.

CAP is created to optimize injection molding efficiency. Its superior flow characteristics allow molding shields with thin walls and long flow lengths—while maintaining excellent clarity and optical properties and meeting the ANSI Z87.14 standard for eye protection.

## The difference is easy to see.

Unlike polycarbonate (PC), CAP lets you take advantage of the efficiencies of injection molding (compared to die cutting extruded sheet) *without needing to increase thickness.*

By allowing molders to create shields with 1-mm thickness, (most shields made of PC are 2-mm thick), CAP can help:

- Reduce material usage and cost
- Reduce cycle time
- Reduce weight—for greater wearer comfort
- Maintain superior optical properties due to low birefringence

CAP provides a superior combination of chemical resistance and impact strength compared with PC, allowing:

- Better compatibility with popular shield-cleaning agents
- Reduced vision impairment from crazing, whitening, and other aberrations related to chemical attack
- Increased flexibility for a wide range of bonding and fabrication options
- Excellent weatherability
- Potential for improved antifog and antistatic performance

## See greater market visibility, too.

Since the face and safety shield market has become commoditized, it is a greater challenge to differentiate through design. CAP helps designers and brand owners differentiate products—and create higher margins—grounded in the benefits of a material difference.

- CAP combines the efficiencies of injection molding with the freedom of creating thinner shields—one-half the thickness of molded PC.
- CAP enables wear comfort through light weighting while providing cost saving opportunities.
- CAP supports sustainability initiatives and complies with California Proposition 65.





## Ask an expert.

To learn more about how CAP can help advance your vision for safety shields, talk to your Eastman representative.

## CAP lets you take advantage of trends toward biobased plastics.

Tenite™ cellulose acetate propionate (CAP) is manufactured from 100% renewable softwood trees that are harvested utilizing sustainable forestry management practices. For every pound of Tenite produced, approximately 40% to 50% by weight is renewable content.

## Ready to support your unique vision for safety shields

Eastman has been a leader in cellulosic solutions for more than 80 years. Tenite™ cellulose acetate propionate (CAP) is a product of that experience and leadership. With CAP and other engineering bioplastics, Eastman is prepared to help forward-looking brands bring innovative products to market.

Eastman also is a leader in optimizing process parameters and testing performance. It has the technical expertise and applications experience to deliver total solutions for customers throughout the safety product value chain.

---

**EASTMAN**

The results of insight™

### Eastman Corporate Headquarters

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

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

[www.eastman.com/locations](http://www.eastman.com/locations)

Although the information and recommendations set forth herein are presented in good faith, Eastman Chemical Company ("Eastman") and its subsidiaries make no representations or warranties as to the completeness or accuracy thereof. 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. Nothing contained herein is to be construed as a recommendation to use any product, process, equipment, or formulation in conflict with any patent, and we make no representations or warranties, express or implied, that the use thereof will not infringe any patent. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS AND NOTHING HEREIN WAIVES ANY OF THE SELLER'S CONDITIONS OF SALE.

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

© 2018 Eastman. Eastman brands referenced herein are trademarks of Eastman or one of its subsidiaries or are being used under license. The ® symbol denotes registered trademark status in the U.S.; marks may also be registered internationally. Non-Eastman brands referenced herein are trademarks of their respective owners.