

Eastman TRĒVA™
engineering bioplastic

Advancing HMI lens and decorative trim technology

The consumer interest in enhanced connectivity inside the vehicle is driving designers and engineer to search for glasslike polymers that allow touch displays to be integrated with the rest of the vehicle interior and maintain occupant safety without compromising styling.

Eastman Specialty Plastics has introduced an innovative polymer based on cellulose ester chemistry—and engineered for optimum performance and sustainability. Eastman Trēva™ engineering bioplastics are up to 46% biobased and offer a unique combination of properties. Eastman can help you use them to keep pace with the rising demand for integrated HMI lens decorative trim and interior accent hard trim for automotive interiors.

Optimizing optics

Like other cellulose esters used for films in LCD screens, Trēva has excellent optical and birefringence properties. The photo



PC

Trēva

PMMA

above shows how it compares with polycarbonate (PC) and PMMA. Trēva also provides low haze and high clarity. Eastman can apply its rich history in optical polymers and films to optimize your HMI lens cover designs.

Maximizing performance

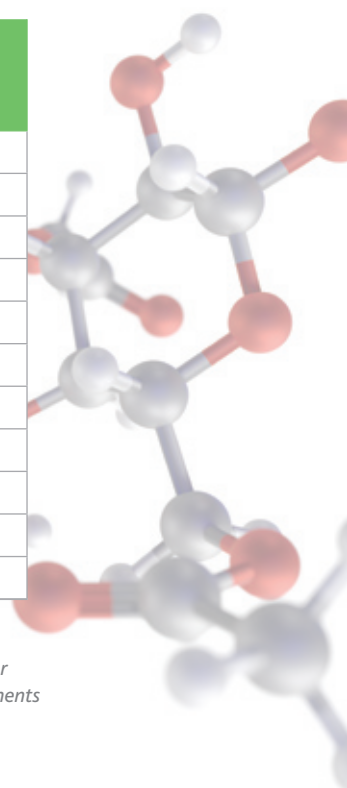
In addition to outstanding optical performance, the demanding automotive interior environment requires properties that deliver impact strength and resistance to real-world challenges such as chemical attack, heat, humidity, and UV.

Table 1: Property comparison for the automotive market

Needs	Eastman Trēva™ engineering bioplastic	Eastman Tritan™ copolyester	Polycarbonate (PC)	PC/ABS	PMMA
Toughness	●	●	●	●	●
Chemical resistance	●	●	●	●	●
Birefringence	●	●	●	N/A	●
Volatile organic components (VOC)*	●	●	●	●	●
Aesthetics (gloss)	●	●	●	●	●
Cold impact	●	●	●	●	●
Dimensional stability	●	●	●	●	●
Sound damping	●	●	●	●	●
Processability	●	●	●	●	●
Temperature resistance	●	●	●	●	●
Clarity	●	●	●	N/A	●

● Excellent ● Better ● Good ● Fair

* Trēva is produced from high-molecular weight cellulose grown from sustainably managed forests instead of starting from low-molecular weight monomers that may not completely react in the final polymer. As a result, Trēva can significantly reduce volatile organic components (VOC) compared with many traditional thermoplastics.



Improving performance and processability

Trēva also provides superior viscosity that enables molders to efficiently fill thin-walled lens and decorative trim designs. Combined with its toughness and other properties, this makes Trēva ideal for the mutual goals of styling, functionality, and performance while reducing weight.

For detailed comparisons of viscosity, flow characteristics, and other advantages of Trēva, contact your Eastman representative. See how Eastman's decades of technological expertise in optics and global reach can help you keep advancing HMI lens and decorative trim technology.

Table 2: Volatile organic components—VDA 278 test method

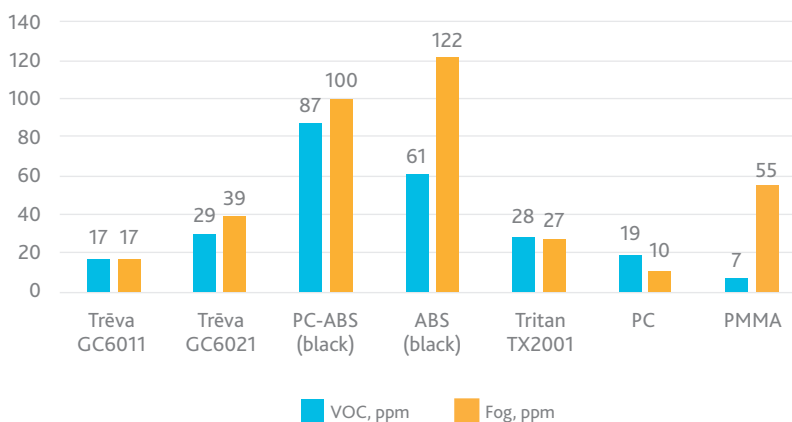
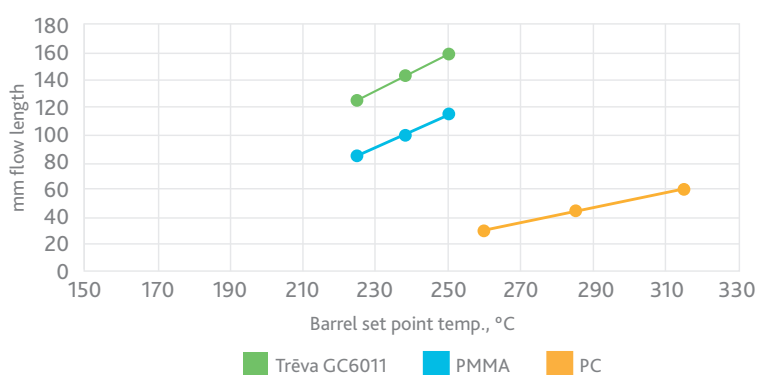


Table 3: Advantaged processing spiral flow



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