



 Albemarle®

# SAYTEX ALERO™

*Modern fire safety, advanced sustainability*



 Albemarle®  
ALL THE ELEMENTS FOR A BETTER WORLD

IN THE HOME AND ELECTRIC VEHICLES (EVs)

# SAYTEX ALERO

*Sustainable Innovation: Enabling Recyclability and PTFE-Free Formulations*

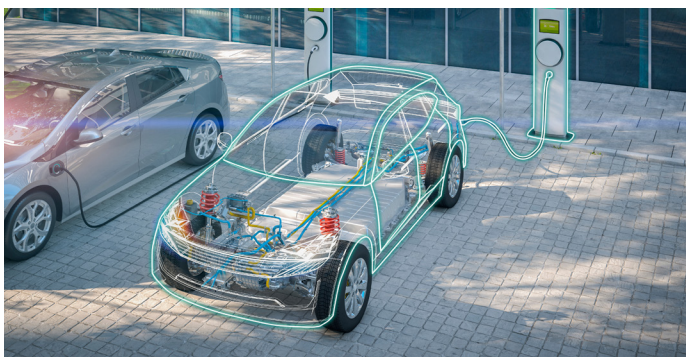
## WHAT IS SAYTEX ALERO?

Albemarle's most versatile, polymeric flame retardant with next-generation recyclability and safety profiles. **SAYTEX ALERO™** enables a wide array of processing conditions and customizable material properties, and allows manufacturers to meet the fire safety demands of an increasingly electrified and digital world.



## ELECTRICAL & ELECTRONICS

SAYTEX ALERO flame retardant can be used in the enclosures of various electric and electronic systems, enhancing safety in everyday life.



## AUTOMOTIVE

SAYTEX ALERO flame retardant enables auto manufacturers to safely use polymers in the battery casings and other electrical components of cars. It is an important ingredient for supporting the lightweighting of electric vehicles.



## BUILDING & CONSTRUCTION

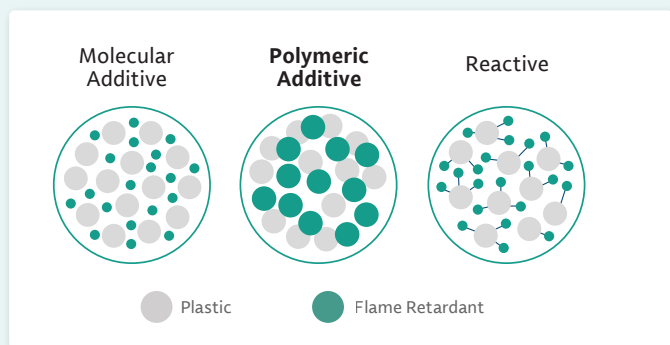
SAYTEX ALERO is ideal to improve the safety measures of various systems for homes, offices and other types of buildings in the electrical junction box and the HVAC network, to name a few.



## POLYMERIC FLAME RETARDANTS

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## POLYMERIC FLAME RETARDANTS VS. OTHER TYPES OF FRs

The illustration above shows the differences among polymer compounds modified with molecular, polymeric and reactive flame retardants (FRs). While reactive FRs can offer decreased migration concerns, due to the constraints of chemical bonding, they may not have as much formulation versatility compared with molecular or polymeric FRs. Conversely, molecular FRs can offer versatility in formulations, but may exhibit more migration within a resin compared with polymeric or reactive FRs.

Generally, **polymeric FRs** like SAYTEX ALERO offer higher stability than molecular additives and greater formulation versatility than reactive FRs. The large structure of polymeric FRs makes it difficult for the FR molecules to migrate within the polymer matrix. Because polymeric formulations are non-reactive, these FRs may also avoid the constraints of chemical bonding. As such, polymeric FRs like SAYTEX ALERO can offer a good balance of versatility and stability for many applications.

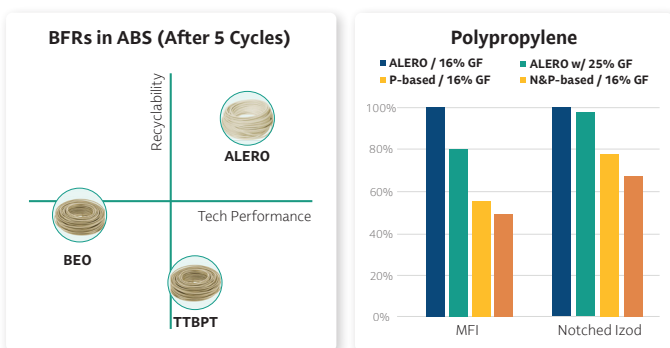
## ADVANCED SUSTAINABILITY

### SAYTEX ALERO Enables Products With Lower Carbon Footprint

Compared to elements used in leading alternative flame retardants, the extraction of elemental bromine is less energy intensive, resulting in flame retardants with lower overall greenhouse gas emissions.<sup>1,2</sup> This includes SAYTEX ALERO and other products in the SAYTEX® portfolio.

<sup>1</sup> Albemarle ISO-Compliant Study (2022)

<sup>2</sup> SK-Enviros

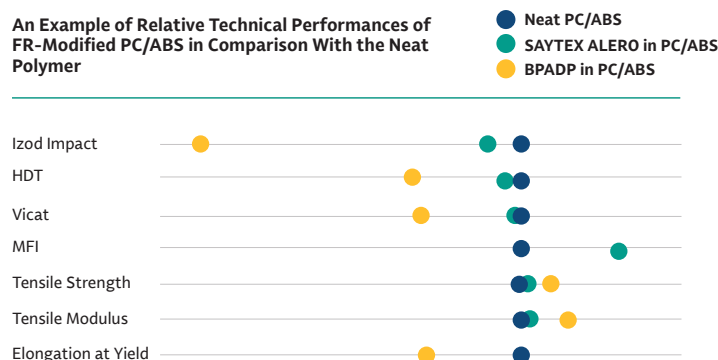


## HIGH PERFORMANCE FOR ABS AND POLYPROPYLENE

**ABS** | 10% lower loading than TTBT; 30% lower loading than BEO, better performance and better appearance.

**Polypropylene** | Melt blendable properties enhance product uniformity and formulation flexibility.

### An Example of Relative Technical Performances of FR-Modified PC/ABS in Comparison With the Neat Polymer



## HIGH PERFORMANCE FOR PC/ABS

Superior impact strength with no synergist needed.





EFFECTIVE, TRUSTED FLAME RETARDANTS BACKED BY SCIENCE

# Your Product's Fire Safety *Begins With Albemarle*

**In addition to our commitments to high-quality and reliable supply,** our industry knowledge and technical expertise position us as a valuable partner for our customers. Albemarle works closely with our customers to ensure that fire safety standards are met today while maintaining engagement in regulations worldwide to guide smart decisions for future development.

## END-TO-END EXPERTISE TO MEET OUR CUSTOMERS NEEDS

Albemarle is a partner of choice because of its decades-long reputation for end-to-end technical, product and industry expertise, as well as its broad understanding of the global regulatory landscape for flame retardants.

## GLOBAL ENGAGEMENT FOR ADVOCACY OF BROMINATED FLAME RETARDANTS

Our skilled team is actively engaging with global policymakers and regulatory influencers worldwide. Our goal is to drive value chain collaborations and create and engage in global affiliations who advocate for bromine products.

Learn more about SAYTEX ALERO at [albemarle.com/saytex-alero](https://albemarle.com/saytex-alero)

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