



# The Future of Non-Halogenated Fire Retardant Foam

*By Jenny Angott, SEKISUI Voltek*

In recent years, a more environmentally conscious approach has led to increased regulation across various industries on where halogens can be used, and ignited (no pun intended) the demand for halogen-free options. For example, the State of New York prohibited the use of halogenated FRs and phosphorus-bromine FRs for use in residential upholstered furniture, effective July 2022. Likewise, Europe has banned the sale of televisions that contain brominated flame retardants. The non-halogenated flame retardant market is expected to continue to gain traction in the coming years in building and construction, electronic, textile and transportation industries.

Flame retardants are additives from the halogen chemical group that are added to plastics to limit the ability for fire to catch or spread when exposed to a spark. These additives have been included in commercial and consumer products for many decades. While effective in limiting fire, when burned, these chemicals produce toxic gasses that can be harmful to humans and the environment.

SEKISUI Voltek has developed a non-halogenated PE and non-halogenated PP foam. The PE foam, commonly used for insulation purposes in the general industrial market, has shown passing results on the following test methods:

- FMVSS-302 NBR-SE
- UL94 Horizontal
- FAA 12 and 60 seconds vertical burn
- ASTM E 84 Class I

Our PP LHR (Low Heat Release) foam is approved for use in aerospace because of its physical properties that meet or exceed the FAA regulations for heat release, vertical burn, smoke density, and toxic gas emissions. Our foam has passed the following testing specifications:

- Vertical Burn – 12sec/60sec.
- Heat Release 65/65
- Smoke Density
- Toxicity Gas Emission - Flaming
- Toxicity Gas Emission – Non-Flaming

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