Huber Engineered Materials supplies Kemgard® flame retardants and smoke suppressants and this proprietary technology produces a highly effective product line-up of molybdate compounds supported or coated on low-cost core fillers. The Kemgard products have been offered for many years and are one of the major smoke suppressants used in PVC applications. Kemgard products compete in PVC with ammonium octamolybdate (AOM), zinc borates and antimony oxide, among others where the Kemgard products have shown superior effectiveness.

Now, Huber is introducing Kemgard® 981 and Kemgard® MZM flame retardants and smoke suppressants into the polyolefin market to meet the most demanding flame and smoke requirements, such as ASTM E84 and UL 723.

Kemgard 981 and MZM work in the solid phase, providing a char-forming flame retardant mechanism. Char-forming flame retardants provide protection by decomposing in such a manner as to produce a protective char coating or layer around the burning item or fuel source. In this way, these types keep carbon from getting to the smoke phase by reducing the amount of fuel available in the gas phase.

Huber’s metal hydroxide flame retardants (Alumina Trihydrate [ATH] and Magnesium Hydroxide [MDH]) provide another mechanism in the solid phase, which functions by removing heat energy (through the release of cooling water) from the burning process. These types reflect the heat necessary to convert the fuel to the gas phase and also dilute the available fuel source simply by their presence in the system.
**Kemgard® 981 Flame Retardant and Smoke Suppressant in Peroxide Cross-Linked EVA/LDPE**

Kemgard™ 981 facilitates char formation in peroxide cross-linked EVA/LDPE blends when replacing small amounts (<7%) of metal hydroxide. The stronger char formation facilitated by Kemgard 981 leads to a significant reduction in the heat release, smoke generation and overall burning rate or flame spread rate of EVA/LDPE compounds.

**Effect of Kemgard® MZM Flame Retardant and Smoke Suppressant on Char Formation**

There’s no doubt Kemgard 981 and Kemgard MZM can be excellent flame retardants and smoke suppressants in your next polyolefins application. Along with these high-performing Kemgard products comes Huber’s unsurpassed technical expertise and customer service. Before things heat up, contact us today for more information and a sample of Kemgard 981 and MZM.

**Call: 866-JMHUBER (866-564-8237)  
Click: kemgard.com  
Email: hubermaterials@huber.com**

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**TECHNICAL BULLETIN ONE**