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# [ FIRE RETARDANTS ]

## HYMOD™ SB805 SP

-vinyl silane treated alumina trihydrate-

**PRODUCT DESCRIPTION:**

Hymod SB805SP and is a high performance, low surface area, low particle size alumina trihydrate (ATH or hydrated alumina) utilized as flame retardants and smoke suppressants in elastomeric applications. ATH is the most frequently used flame retardant in the world. The Hymod SB805SP grade is a vinyl silane treated ATH for improved processing and physical properties of thermoset and thermoplastic compounds. ATH is a very effective flame retardant due to its thermodynamic properties which absorb heat and release water vapor. Alumina trihydrate releases its 35% water of crystallization as water vapor when heated above 205°C. The resulting endothermic reaction cools the product below flash point, reducing the risk of fire and acts as a vapor barrier to prevent oxygen from reaching the flame. Typical loadings vary from 20 phr to 150 phr. Because many polymers like polyethylene and polypropylene process above 200°C, these polyolefins should use magnesium hydroxide as a flame retardant filler since its water of hydration releases at approximately 325°C.

**TYPICAL PROPERTIES:**

Chemical Decomposition.....	Al (OH) <sub>3</sub> → Al <sub>2</sub> O <sub>3</sub> - 3H <sub>2</sub> O
Al (OH) <sub>3</sub> .....	99.2%
Loss on Ignition .....	34.6%
SiO <sub>2</sub> .....	0.005%
Fe <sub>2</sub> O <sub>3</sub> .....	0.007%
Na <sub>2</sub> O.....	0.20%
Median Particle Size μ.....	2.6
Surface Area m <sup>2</sup> /g.....	4-6
Oil Absorption.....	34
Free Moisture % (105°C).....	0.5

Many other grades are available incorporating an assortment of chemical treatments including mercapto, epoxy, and other silanes, stearates and wetting agents. These grades may be made-to-order items with limited inventory. Please check with your sales representative for current product status and minimum purchase requirements.

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 gpb 9/10, Hymod SB805SP

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