



255 Fountain Street Akron, Ohio 44304-1991
330-535-2100 ♦ 800-321-2260 ♦ Fax 330-535-8947

MAGNESIA PRODUCTS

ZEROGEN - VERTEX -TREATED MAGNESIUM HYDROXIDE-

DESCRIPTION:

Zerogen/Vertex are silane-treated magnesium hydroxides. These products are utilized as an inert filler, non-halogen flame retardant, smoke suppressant for latex foam, elastomeric goods, epoxies, reinforced polyesters, phenolics and urethane foam. The silane treatment enhances cross-link density and improves physical and dynamic properties.

Magnesium hydroxide, specific gravity of 2.36, releases its 31% water of crystallization when heated to above 325°C as water vapor. The high temperature of water release allows for processing of engineered plastics without moisture entering into the molding operation. The resulting endothermic reaction cools the product below flash point, reducing the risk of fire. The vapor released also helps reduce smoke, an additional advantage of this type flame retardant. Char formation is also improved over alumina trihydrate.

Magnesium hydroxide also functions as an excellent acid acceptor in a chlorinated polyethylene (CPE) non-peroxide, thiadiazole cure system providing better scorch time as well as faster cure than magnesium oxide. Mg(OH)₂ has also been shown to prevent premature scorch vs. MgO in Hypalon formulas.

The Vertex products are economical treated-magnesium hydroxide grades. Zerogen 50 SP is a cleaner grade, i.e., higher magnesium hydroxide content, lower moisture and residual metals, etc., typically used in more demanding applications.

TYPICAL PROPERTIES:	VERTEX	VERTEX ST	ZEROGEN 50SP
Treatment	Silane	Stearic Acid	Silane
Mg(OH) ₂ , %	97.5	97.5	99.6
Free Moisture (105C, 2 hrs) ¹ , %	0.30	0.29	0.10
Surface Area (BET) ¹ , m ² /gm	7.0	7.0	6.5
Average Particle Size ¹ , microns	1.8	1.8	0.7
Calcium as Ca, %	0.3	0.3	0.06
Chlorine as Cl, %	1.2	1.2	0.04
Iron as Fe, %	0.03	0.03	0.004
Oil Absorption, ml/100 gm	30	30	43

® Zerogen and Vertex are registered trademarks of J.M. Huber Corporation

jh 0603, t-zerogen/vertex

Included with its product literature and upon the request of its customers, Akrochem provides product specifications and evaluations, suggested formulations and recommendations and other technical assistance, both orally and in writing (collectively the "Technical Information"). Although Akrochem believes all Technical Information to be true and correct, it makes no warranty, either express or implied, as to the accuracy, completeness, or fitness of the Technical Information for any intended use, or the results which may be obtained by any person using the Technical Information. Akrochem will not be liable for any cost, loss or damage, in tort, contract or otherwise, arising from customer use of Akrochem products or Technical Information. It is the customer's sole responsibility to test the products and any Technical Information provided to determine whether they are suitable for the customer's needs. Before working with any product, the customer must read

and become familiar with available information concerning its hazards, proper use, storage and handling, including all health, safety, and hygiene precautions recommended by the manufacturer. Nothing in the Technical Information is intended to be a recommendation to use any product, method, or process in violation of any intellectual property rights or process. The names/brandnames appearing throughout this literature are believed to be either brandnames or registered or unregistered trademarks. AKROCHEM CORPORATION DISCLAIMS ANY AND ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE, RELATED TO ANY PRODUCTS OR TECHNICAL INFORMATION PROVIDED BY AKROCHEM.