



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

MINERAL FILLERS
-ADDITIONAL FILLERS-

Hydrotalcite FG

DESCRIPTION:

Hydrotalcite FG is a synthetic, fine, white powder used as a lead replacement in halogenated polymers to scavenge acid by-products, which are detrimental to many polymeric processing and physical properties. Chemically, Hydrotalcite is magnesium aluminum hydroxy carbonate. Hydrotalcite has the added benefit of releasing water at 300°C (higher than ATH, thus safer processing) and therefore are used as flame-retardants and smoke suppressants. Hydrotalcite FG product is environmentally safe, non-toxic, non-corrosive and non-volatile.

TYPICAL PROPERTIES:

Average particle size (d50, µm).....	≤1
90% less than, µm.....	≤10
Density(g/cm ³)	2.21
Moisture (105°C, 2hr).....	≤0.5%

APPLICATIONS:

Hydrotalcite is primarily utilized as a lead oxide (e.g., litharge, red lead, BSWL) replacement to scavenge acidic byproducts in halogenated polymers such as: polychloroprene (CR), chlorosulfonated polyethylene (CSM), chlorinated polyethylene (CPE), epichlorohydrin (ECO), polyvinylchloride (PVC), fluoroelastomers (FKM) and halobutyls (BIIR, CIIR). In many formulations, these additives have successfully replaced lead oxides without disrupting any processing or physical properties of the compounds. In addition, these antacids provide superior water swell compared to magnesium oxides in all the elastomers stated above. In most formulations, lead oxides will show slightly better water swell behavior compared to hydrotalcite products (it may help to also use epoxidized soybean oil as plasticizer to help with acid acceptance).

Hydrotalcite can improve color of EPDM's by scavenging the acid chlorides left over from the polymerization process. Hydrotalcite also has a special attribute of an internal decomposition and water release from 260°C to 300°C acting as flame-retardant and smoke suppressant. This product has been added to other flame retardant systems as inorganic stabilizer and smoke suppressant, especially with halogenated systems. Hydrotalcite is also utilized in electrical applications for their anti-tracking properties. Compounds that could not be colored brightly due to lead content can now be made using hydrotalcites.

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