

# GMO

**Granular Magnesium Oxide (GMO) is a specially processed hard, bead-like magnesia, adapted for use in filters to neutralize acidity by increasing the pH value,**

By neutralizing the free carbon dioxide in water, GMO can correct acidic water conditions and render it less corrosive. GMO, being a highly reactive magnesium oxide, is used most effectively where pH correction is substantial or high flow conditions are in use. pH correction and media consumption are affected by a number of water chemical variables. Being soluble to acidity, GMO will slowly dissolve and will need to be replenished periodically. On a per weight basis, magnesium oxide can neutralize much more acidity than can calcium carbonate, (five times as much). This results in greatly reduced chemical usage for the same pH correction.

**Please note, under certain low flow conditions, GMO may overcorrect and create a highly basic (high pH) condition.**

Under certain hardness conditions, pH correction can cause hardness minerals to precipitate out of solution, resulting in cementing or solidification of the GMO, mineral bed. Upflow service is generally recommended with hardness exceeding five grains per gallon. (Always use an in-line filter ahead of an upflow system to prevent plugging of the lower distribution screen.) As GMO magnesium oxide neutralizes the water, it will increase hardness and a softener may become necessary after the neutralizing filter. GMO can be effectively combined with Calcite to combine the high flow neutralization properties of GMO along with the slower reacting low flow properties of Calcite, reducing potentially high basic properties due to overcorrection.

## ADVANTAGES

- High degree of activity and speed of correction allowing high flow
- High capacity...less chemical usage

## PHYSICAL PROPERTIES

- Color: Brownish white
- Bulk Density: 75 lbs./cu. ft.
- Mesh Size: 6 x 16
- Specific Gravity: 3.6 gm/cc
- Effective Size: 1.4 mm
- Uniform Coefficient: 1.7
- Composition: MgO 97% min.

## CONDITIONS FOR OPERATION

- Downflow service is generally satisfactory on waters with a hardness of less than five grains/gal. or where it's combined with Calcite at least 50-50. Upflow service is generally recommended with hardness exceeding five grains/gal. to prevent "cementing of the Corosex bed"
- Use distributors designed for upflow applications
- A gravel support bed is recommended
- Water pH range: 4.5-6.0
- Bed depth: 24-30 in.
- Freeboard: 50% of bed depth (min.)
- Backwash frequently to prevent possible cementing
- Backwash rate: 10-12 gpm/sq. ft.
- Service flow rate: 5-6 gpm/sq. ft. but may be modified to adapt to local conditions