

# AQUAMAG®

## Used for Neutralization of Hydrochloric Acid (HCL)

For two moles (73 lbs) of 100% Hydrochloric Acid to be neutralized, the following chemical reactions occur:

AQUAMAG®	Mg(OH) <sub>2</sub> (58.3 lbs)	+	2HCL (73 lbs)	→	MgCl <sub>2</sub> (95.3 lbs)	+	2H <sub>2</sub> O (36 lbs)		
Hydrated Lime	Ca(OH) <sub>2</sub> (74 lbs)	+	2HCL (73 lbs)	→	CaCl <sub>2</sub> (111 lbs)	+	2H <sub>2</sub> O (36 lbs)		
Caustic Soda	2NaOH (80 lbs)	+	2HCL (73 lbs)	→	2NaCl (142 lbs)	+	2H <sub>2</sub> O (36 lbs)		
Soda Ash	Na <sub>2</sub> CO <sub>3</sub> (106 lbs)	+	2HCL (73 lbs)	→	2NaCl (117 lbs)	+	CO <sub>2</sub> ↑ (44 lbs)	+	H <sub>2</sub> O (18 lbs)
Caustic Potash	2KOH (112 lbs)	+	2HCL (73 lbs)	→	2KCl (149 lbs)	+	2H <sub>2</sub> O (36 lbs)		

These calculations show the amount of alkali needed to neutralize one ton of Hydrochloric Acid and the resultant amount of salt formed:

	<u>Neutralizing Agent</u>	<u>Lbs Required To Neutralize One Ton H<sub>2</sub>SO<sub>4</sub></u>	<u>Ratio to Mg(OH)<sub>2</sub></u>	<u>Total Dissolved Solids in Effluent (100% Basis) Per Ton of Acid</u>
MAGOX®	MgO	1100	0.69	2610
AQUAMAG®	Mg(OH) <sub>2</sub>	1600	1.00	2610
Hydrated Lime	Ca(OH) <sub>2</sub>	2027	1.27	3040
Caustic Soda	NaOH	2190	1.37	3210
Soda Ash	Na <sub>2</sub> CO <sub>3</sub>	2900	1.82	3210
Caustic Potash	KOH	3070	1.92	4080

For more information, please contact your local Hill Brothers representative.  
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