

AQUAMAG®

Used for Neutralization of Sulfuric Acid (H₂SO₄)

For one mole (98 lbs) of 100% Sulfuric Acid to be neutralized, the following chemical reactions occur:

AQUAMAG®	Mg(OH) ₂ (58.3 lbs)	+	H ₂ SO ₄ (98 lbs)	→	MgSO ₄ (120.3 lbs)	+	2H ₂ O (36 lbs)		
Hydrated Lime	Ca(OH) ₂ (74 lbs)	+	H ₂ SO ₄ (98 lbs)	→	CaSO ₄ • 2H ₂ O (172 lbs)	↓	*		
Caustic Soda	2NaOH (80 lbs)	+	H ₂ SO ₄ (98 lbs)	→	Na ₂ SO ₄ (142 lbs)	+	2H ₂ O (36 lbs)		
Soda Ash	Na ₂ CO ₃ (106 lbs)	+	H ₂ SO ₄ (98 lbs)	→	Na ₂ SO ₄ (142 lbs)	+	CO ₂ ↑ (44 lbs)	+	H ₂ O (18 lbs)
Caustic Potash	2KOH (112 lbs)	+	H ₂ SO ₄ (98 lbs)	→	K ₂ SO ₄ (174 lbs)	+	2H ₂ O (36 lbs)		

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

	<u>Neutralizing Agent</u>	<u>Lbs Required To Neutralize One Ton H₂SO₄</u>	<u>Ratio to Mg(OH)₂</u>	<u>Total Dissolved Solids in Effluent (100% Basis) Per Ton of Acid</u>
MAGOX®	MgO	822	0.69	2460
AQUAMAG®	Mg(OH) ₂	1190	1.00	2460
Hydrated Lime	Ca(OH) ₂	1510	1.27	3510 * ↓
Caustic Soda	NaOH	1630	1.37	2900
Soda Ash	Na ₂ CO ₃	2160	1.82	2900
Caustic Potash	KOH	2290	1.92	3550

*↓The CaSO₄•2H₂O will precipitate as a sludge.

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