GYPSUM

DESCRIPTION

Gypsum ($CaSO_4 \cdot 2H_2O$) is a naturally hydrated Calcium Sulphate and is only slightly soluble in water.

PROPERTIES

Physical		Chemical	
Appearance:	Light grey powder	Type:	Inorganic Salt
Specific Gravity:	2.9 (rock)	Solubility:	Slight (water)
Bulk Density:	1120-1424 kg/m^3	pH:	6.5
Flash Point:	Not applicable	Microtox:	Not applicable

APPLICATION

Gypsum is used as the source of calcium in clear-water drilling and in other inhibitive mud systems. In floc-water drilling normal concentrations of calcium fall in the range of 400-800 mg/L. "Gyp based muds" are used for specific applications i.e. (drilling thick sections of anhydrite or cement). In a Gyp-Gel system maintain the Ca^{++} at 400-600 mg/L to ensure the system maintains it “gypped-over” nature.

Gypsum can also be added as a contaminant (in low concentrations) to bentonite-based mud systems or as a source of calcium for mud systems that are over treated with Soda Ash.

MIXING AND HANDLING

Gypsum can be added to the mud system through the mud hopper. In lightly treated bentonite-based systems the mud will flocculate with consequent thickening and an increase in fluid loss.

Gypsum is hygroscopic; therefore it should be stored in a dry environment to avoid lumping and hardening. It is advisable to use a dust mask and eye protection while mixing all powdered products. A dust hazard is present while gypsum is being mixed.

WHMIS: Not controlled	**TDG:** Not regulated	**PACKAGING:** 25 kg sack