



Drilling Fluids, Inc.

Specialty Products

Description

SAPP

SAPP is Sodium Acid Pyrophosphate, with a chemical formula of $\text{Na}_2\text{H}_2\text{P}_2\text{O}_7$.

Uses

SAPP is used to treat cement-contaminated mud. SAPP is used as a low-cost, fast-acting dispersant in low-weight freshwater drilling fluids. SAPP is effective at low concentration levels. SAPP is effective in controlling free calcium in low pH drilling fluids. SAPP is utilized as a clay dispersant to reduce bit balling.

Benefits

Used as a calcium scavenger and pH reducer, SAPP may be added to combat cement contamination, usually in combination with BICARBONATE OF SODA. SAPP may be used in low-weight freshwater drilling fluids to reduce viscosity and gels and to reduce the hardness level. After drilling cement and treating with BICARBONATE OF SODA, additional thinning can be achieved with SAPP without risking our treatment and bicarbonate contamination.

Treatment

SAPP should be added in small incremental amounts of as little as 0.1 ppb to reduce viscosity and gels. For cement contamination, SAPP additions will vary with the amount and hardness of the cement. Normally, SAPP can be added in concentrations of 0.5 to 1.0 ppb for each 1 ppb of excess lime. Major adjustments to pH are more effectively accomplished with Phosphoric Acid or Citric Acid.

Function

The acid portion of SAPP provides a source of free hydrogen ions to combine with free hydroxyl ions producing water as a byproduct. The phosphate portion of SAPP acts as a dispersant. Phosphate dispersants are effective at low temperatures and concentrations. High temperature can convert phosphates to orthophosphates which act as a viscosifier.



Specialty Products

Typical Physical Properties

Safe Handling Recommendations

Packaging

SAPP (continued)

Appearance.....white crystalline powder
pH (1% solution).....4.2
Bulk density.....61.9

Utilize normal precautions for employee protection when handling chemical products. Use of appropriate respirator, gloves, goggles, and apron is recommended for employee comfort and protection. See Material Safety Data Sheet (MSDS) for this product prior to use.

SAPP is packaged in 50 pound and 100 pound multi-wall bags.