

Anti-corrosion Agent KCM027

1. Introduction

Typical Portland cement systems are not resistant to corrosive chemical environment such as CO₂ or H₂S bearing formations. The reaction of gaseous CO₂ and H₂S with calcium bearing phases in an oilwell cement sample is known to cause a lowering of alkalinity, leading to the corrosion of the cement.

KCM027 is an inorganic powder that can be added into regular Portland cement systems to improve both cement strength and chemical resistance to corrosive environment such as CO₂ and H₂S bearing formations. KCM027 tends to increase cement compressive strength and reduce slurry density as well.

2. Physical Properties and Hazards

Additives	Form	S.G.	Water Solubility	Melting/Flash Point (°C)	Health Hazard	Physical Hazard	pH
KCM027	Gray Powder	2.88-3.08	Insoluble	>93	Eyes, Inhalation	Dust	N/A

3. Chemical Properties and Application

Addition of KCM027 not only reduces cement permeability to prevent the encroachment of corrosive fluids, but also reacts with extra lime in cement to improve the compressive strength of the cement. Theoretically KCM027 can be used at any applicable cementing temperatures and densities due to its chemical and physical properties. KCM027 is compatible with most cement additives and can be used in fresh, salt and seawater based cement slurries.

4. Treatment

30-100%BWOC is generally required to have effective corrosion control and strength improvement depend on temperature, mixing water, and slurry density.

5. Packaging

KCM027 is supplied in plastic-lining bags with net weight of 25 kg/sack.

It should be stored in shaded areas with good ventilation. Keep it away from high temperature, humidity, and direct sunlight.