

Weighting Agent KCM019R

1. Introduction

In deep, ultra-deep, and complex well cementing operations, factors such as high pore pressure, formation creep, and tectonic stress often result in a narrow safe density window of the wellbore, imposing higher density requirements on the cement slurry system. Although simply reducing the mix water content can increase the slurry density, it severely deteriorates the rheological properties and pumpability of the cement slurry, exacerbates the risk of free water and solid particle settlement, and makes it difficult to achieve adequate fluid loss control and other critical performance parameters. Therefore, the use of high-quality weighting agents serves as a core technical means to enable safe and efficient placement of high-density cement slurries.

2. Physical Properties and Hazards

Additive	Form	S.G.	Water Solubility	Melting/Flash Point (°C)	Health Hazard	Physical Hazard	pH
KCM019R	Black Solid	4.95-5.35	Insoluble	Not Combustible	None	None	N/A

3. Chemical Properties and Application

KCM019R is an inert iron oxide mineral with high specific gravity. It greatly increases slurry density without adversely affecting the properties of cement system. KCM019R is a finely dispersed material which absorbs very little water.

The thickening time with KCM019R will vary depending upon the well condition and the amount of KCM019R used. Therefore, thickening time must be individually tested in the laboratory with actual material used.

Though large amount of KCM019R is used, there will only be a minor effect on the compressive strengths of various cement system.

4. Treatment

KCM019R is normally used to prepare cement slurry with densities up to 2.28g/cm³ (19.0lb/gal). The concentration used is up to 100%BWOC.

5. Packaging

KCM019R is supplied in plastic-lining bags with net weight of 25kg/sack.

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