

## Barite KCM041

### 1. Introduction

Barite increases the hydrostatic pressure of the drilling mud or other wellbore fluids allowing it to compensate for high-pressure zones experienced. The softness of the mineral also prevents it from damaging downhole tools during well services operations and enables it to serve as a lubricant. The American Petroleum Institute (API) has established specifications for the use of barite in drilling mud. KCM041 is a weighting agent of barium sulfate (known as Barite) used to weigh drilling and cement fluids.

### 2. Physical Properties and Hazards

| Additive | Form               | S.G.      | Water Solubility | Melting/Flash Point (°C) | Health Hazard | Physical Hazard | pH  |
|----------|--------------------|-----------|------------------|--------------------------|---------------|-----------------|-----|
| KCM041   | Grey to Tan Powder | 3.85-4.25 | Insoluble        | Not Available            | None          | Dust            | N/A |

### 3. Chemical Properties and Application

The chemical formula for KCM041 (barite) is  $\text{BaSO}_4$ . It has a high specific gravity of  $4.50 \text{ g/cm}^3$ . Its Mohs hardness is 3.0 to 3.5. The primary countries in which commercial deposits of barite are currently found are the United States, China, India and Morocco. Barite's high density and chemical inertness make it an ideal mineral for many applications. In drilling mud, barite additive is beneficial since it helps restrain high formation pressure and improves mud displacement by increasing slurry density. It is applicable in high temperature wells and is not a hazardous waste.

### 4. Treatment

KCM041 is effective at bottom hole temperatures between  $80^\circ\text{F}$  and  $500^\circ\text{F}$ . Pure barium sulfate has a specific gravity of  $4.50 \text{ g/cm}^3$ , but drilling-grade barite is slightly lower grade, and expected to have a specific gravity of at around  $4.00 \text{ g/cm}^3$ .

### 5. Packaging

KCM041 is supplied in 1000kg/Jumbo bag.

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