

## Weighing Agent KDF016

### 1. Introduction

Weighing agents are generally added into drilling fluids to increase the fluid density.

KDF016 is API Barite used to increase the density of drilling fluids. KDF016 is supplied to meet the current API specifications. Generally the fluid density can be increased up to 21ppg (2.52SG) by addition of KDF016.

### 2. Physical Properties and Hazards

| Additive | Form        | S.G. | Water Solubility | Melting/Flash Point (°C) | Health Hazard | Physical Hazard | pH  |
|----------|-------------|------|------------------|--------------------------|---------------|-----------------|-----|
| KDF016   | Gray Powder | ≥4.2 | Insoluble        | 1580                     | Inhalation    | Dust            | N/A |

### 3. Chemical Properties and Application

Due to its high density, inertness and low cost, KDF016 is the most commonly used weighting agent. Barite weighted muds as heavy as 21ppg (2.52SG) still remain pumpable. KDF016 is also soft, non-abrasive and contains less impurities which can interact with other drilling fluid additives.

Chemical Nature: API Barite

Bulk Density: This can vary from 1920 to 2400 kg/m<sup>3</sup> (120 to 150 lbm/ft<sup>3</sup>) depending on the degree of compaction, moisture content and quality.

### 4. Treatment

The quantity of KDF016 needed is given in the formula below:

Weight required in US metric units:

$$\frac{1490(w_2 - w_1)}{35.5 - w_2} \text{ lbm/bbl}$$

$w_1$  = initial weight (lbm/gal)

$w_2$  = desired final weight (lbm/gal)

Weight required in metric units:

$$\frac{4250(d_2 - d_1)}{4.25 - d_2} \text{ kg/m}^3$$

$d_1$  = initial density (S.G.),

$d_2$  = final required density (S.G.).

### 5. Packaging

KDF016 is supplied in 50 KG multi-lining paper sacks, also supplied in 1 MT jumbo bag or in bulk.

Keep it away from extreme conditions such as places near flames or direct sunlight.