

Expanding Agent KCM025UH

1. Introduction

The final volume of the cement system is generally smaller than the initial volume after cement reacts with mix-water because the absolute density of hydrated products is greater than that of initial reactants. This volume shrinkage shall affect adversely the transmission of hydrostatic pressure to the formation and cement ability to prevent fluid migration.

Good bonding between the cement and casing and between the set cement and formation is essential for effective zone isolation. Cement systems containing KCM025UH will expand slightly after setting and are proven to be effective in zonal isolation and prevention of fluid migration.

2. Physical Properties and Hazards

Additive	Form	S.G.	Water Solubility	Melting/Flash Point (°C)	Health Hazard	Physical Hazard	pH
KCM025UH	Gray Powder	3.45-3.65	Insoluble	Not Combustible	Inhalation	Dust	N/A

3. Chemical Properties and Application

KCM025UH is a solid cement additive, which provides cement expansion after setting, tightening cement against the casing and the formation by exerting the compressive forces against both interfaces. This sealing effect prevents and reduces micro-annulus and fluids migration and improves the primary cementing results.

The application temperature range of KCM025UH is between 280°F and 580°F, the degree of expansion is strongly affected by the temperature and cement system design.

4. Treatment

For the conventional cement slurry system with density of 1.89g/cm³, typical concentration range is between 1% and 5%BWOC.

5. Packaging

KCM025UH 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.