

Shale Stabilizer KDF005

1. Introduction

Shale stabilizers are class of specialty chemical additives used in drilling fluids to prevent the detrimental effects that water can have on reactive shale formations.

KDF005 is a water-soluble polymeric alcohol. When added to drilling fluids, it delivers multiple functions including improving wellbore stability, providing lubrication, reducing fluid loss and mitigating bit balling. It is applicable to high-salinity drilling fluid systems with salt tolerance up to 150,000 ppm.

2. Physical Properties and Hazards

Additives	Form	S.G.	Water Solubility	Melting/Flash Point (°C)	Health Hazard	Physical Hazard	pH
KDF005	Clear Liquid	0.95-1.10	Soluble	-	-	-	7.0-9.0

3. Chemical Properties and Application

The chemical nature of KDF005 makes it a good shale stabilizer. In addition to the mechanism of water molecule replacement through hydrogen bonding, KDF005 can also plug the pores and absorb onto the surfaces of the shale particles to prevent the shale particles from water hydration.

A synergistic effect is expected between KDF005 and other shale inhibitors such as salts to further improve the shale inhibition performance. KDF005 is compatible with most additives in water-based and oil-based drilling fluid systems, features strong contamination resistance, low toxicity and environmental friendliness.

Chemical nature: A water-soluble polymeric alcohol
 Solubility: Readily soluble in fresh water or seawater
 Temperature Stability: Above 400°F while used in non-oxidization conditions

4. Treatment

KDF005 is effective in the concentration range from 2 to 6 vol.% by the volume of liquid phase.

5. Packaging

KDF005 is supplied in 55 GAL drums or customized packaging.

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