

EcoDrill Emulsifier KDF010

1. Introduction

EcoDrill system is an oil-in-water two-phase drilling fluid. It is engineeringly developed to replace Oil-Based Muds (OBMs) for additional benefits of cost-effectiveness and environmentally friendly with the equivalent technical performance as OBMs.

KDF010 emulsifier is a multi-functional surfactant used in EcoDrill systems in order to stabilize the oil-in-water emulsion, reduce the oil/water ratio as low as 30:70 but make EcoDrill system perform as good as OBMs in shale inhibition, fluid loss control and filter-cake quality, rheology, lubrication and HTHP stability.

2. Physical Properties and Hazards

Additive	Form	S.G.	Water Solubility	Melting/Flash Point (°C)	Health Hazard	Physical Hazard	pH
KDF010	Clear Liquid	1.00-1.10	Soluble	-	Eyes	-	12

3. Chemical Properties and Application

KDF010 is specifically developed for EcoDrill technology. Optimization of HLB value of KDF010 plays important role in stabilization of EcoDrill oil-in-brine emulsions in monovalent and multiple valent partially or fully saturated brines.

KDF010 is compatible with other key additives such as lubricant KDF004, viscosifiers KDF041/KDF051, fluid loss control additives KDF017/KDF027/KDF037 and shale stabilizer KDF035 in EcoDrill systems. May require further laboratory testing if any other products used in EcoDrill systems.

Solubility: Readily soluble in fresh water, seawater or saturated brines.

Temperature Stability: Stable to 177°C (350°F) in laboratory tests.

4. Treatment

A typical loading range is 3-5 vol.% depend on bottom hole temperature and oil/brine ratio.

5. Packaging

KDF010 is supplied in 55 GAL plastic or metal drums.

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