

OCL-OPE OBM Primary Emulsifier

Product Description

OCL-OPE is a primary emulsifier for oil-based drilling fluids, synthesized through molecular structure design. It is a low-molecular-weight polymer containing multiple surface-active groups. This emulsifier is a universal type suitable for diesel-based, mineral oil-based, and synthetic-based drilling fluid systems.

When used alone or together with the secondary emulsifier OCL-OSE, it forms a strong adsorption film at the oil/water interface, effectively reducing interfacial tension and increasing the viscosity of the continuous phase. This prevents coalescence of water droplets and significantly enhances the stability of the oil-based drilling fluid system.

OCL-OPE performs well across a wide temperature range. The rheological properties and HTHP (high temperature, high pressure) filtration performance of the system remain stable before and after thermal aging. It also shows excellent resistance to contamination, making it an ideal primary emulsifier for oil-based drilling fluids.

Drilling fluids formulated with OCL-OPE can be weighted with barite, calcium carbonate, or hematite.

Characteristics

- Mainly used as a primary emulsifier in diesel-based, white oil-based, and synthetic-based oil-based drilling fluid systems.
- Effectively reduces oil–water interfacial tension and significantly enhances the stability of oil-based drilling fluids.
- Recommended dosage: 1.0%–1.5% for low-temperature applications; 2.0%–2.5% for high-temperature applications.

Technical Specification

Physical and chemical performance specification

Appearance	Brown-yellow viscous liquid
Density, g/cm ³	0.86-1.05
Viscosity, (100 r/min,20℃)	≥60.0
Flash point(℃)	≥50.0

Water-in-oil drilling fluid performance specification

Emulsion-breaking voltage (V)	≥600.0
Visual Viscosity(MPa·s)	≤70.0
YP/PY,Pa/(MPa·s)	≥0.30
Initial Shear Force,Pa	≥2.0
Final Shear Force,Pa	≥2.5
API FL,ml	≤3.0
HTHP FL,ml	≤8.0

Packing and Storage

- Packaged in 200 L red-painted steel drums.
- Store in a cool, dry, and ventilated place.
- Shelf life: 12 months

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