

MEGADRIVE P

Primary high-performance emulsifier

APPLICATIONS

- Oil-based drilling systems

BENEFITS

- Improves emulsion stability
- Functions as a primary emulsifier
- Provides filtration control
- Helps maintain HPHT filtrate in a water-free state
- Improves the thermal stability and contamination resistance of oil-based mud

FEATURES

- Multipurpose for use in a wide variety of oil mud systems, primarily the MEGADRIL* oil-based temperature-stable invert-emulsion drilling fluid system and the VERSADRIL* diesel oil-based drilling fluid system

The MEGADRIVE P* primary high-performance emulsifier is the primary emulsifier to be used in conjunction with the MEGADRIVE S* secondary high-performance emulsifier designed for oil-based drilling fluids. It is used as the primary emulsifier in the MEGADRIL oil-based temperature-stable invert-emulsion drilling fluid system and provides excellent emulsion stability, filtration control, and temperature stability.

The MEGADRIVE P emulsifier forms the basic brine-in-oil emulsion required for any nonaqueous fluid. Initial system formulations require 3 to 8 lbm/bbl [11.4 to 22.8 kg/m³], depending on the properties desired and other components in the system. Best results are achieved by pairing with the MEGADRIVE S emulsifier and wetting agent. Daily treatments of the MEGADRIVE P emulsifier enhance the emulsion characteristics of these systems. Daily treatments are usually in the 0.05- to 2-lbm/bbl [0.14- to 5.7-kg/m³] range. MEGADRIVE P package emulsifier treatments lower fluid loss.

The preferred ratio of MEGADRIVE P emulsifier to MEGADRIVE S emulsifier is a 3:1 ratio, but a pilot test is required for optimal results. The MEGADRIVE P emulsifier is activated by calcium. Lime should be added to initial formulations.

Limitations

The MEGADRIVE S emulsifier is the recommended coproduct for the MEGADRIL system using the MEGADRIVE P emulsifier as the primary emulsifier. Environmental restrictions concerning the use of oils and oil-based fluids should be considered because the MEGADRIVE S emulsifier is used in conjunction with oil. The MEGADRIVE P emulsifier has been evaluated for use at temperatures up to 350 degF.

Toxicity and handling

Bioassay information is available upon request. Handle as an industrial chemical, wearing protective equipment and observing the precautions described in the Safety Data Sheet (SDS).

Avoid exposure. The MEGADRIVE P emulsifier contains mineral oil, which is an irritant to eyes, skin, and the respiratory system.

Packing and storage

The MEGADRIVE P emulsifier is packaged in 55-galUS [208-L] drums. Store in a dry, well-ventilated area and keep the container closed. Keep away from heat, sparks, and flames, and store away from incompatible substances. Follow safe warehousing practices regarding palletizing, banding, shrink-wrapping, and stacking.

Typical Physical Properties

Physical appearance	Dark-amber viscous liquid
Specific gravity	0.96
Flash point	201 degF [94 degC] (PMCC)