

REDI-DRIL

HIGH PERFORMANCE 1-BAG DRILLING FLUID SYSTEM

DESCRIPTION

REDI-DRIL is a unique, all-in-one, multi-functional drilling fluid product and system, a non-toxic environmentally safe white powder which can be used alone to formulate high-performance drilling fluids. REDI-DRIL owes its versatile performance characteristics to its unusual molecular structure which is interlinked and stabilized.

APPLICATION

REDI-DRIL can be used in fresh, sea, or salt waters to formulate complete drilling fluids with excellent viscosity, filtration, and thixotropic characteristics. The product is especially suitable for KCl muds.

REDI-DRIL exhibits excellent non-Newtonian shear thinning rheological parameters and is suitable for all drilling applications from large-diameter surface holes to small-diameter deep production intervals.

FEATURES

REDI-DRIL alone provides a complete "one-sack" drilling fluid. No other viscosifiers, fluid loss additives, gelling agents, crosslinkers, or thinners are required for most applications. A 1% concentration (3.5 ppb) provides excellent viscosity and gel strengths, with API water loss in the 8 to 12 cc range.

REDI-DRIL is non-dispersive to drilled solids. For this reason, REDI-DRIL retards the incorporation of solids into the fluid.

Cuttings are easily removed by solids control equipment, and the fluid remains relatively clean. Low solids, along with REDI-DRIL's shear-thinning viscosity profile, promote high drilling rates.

REDI-DRIL performs in wells with bottom-hole temperatures up to 250° F (121° C). Stability can be extended to 325° F (163° C) and above by adding REDI-X10 to the fluid.

REDI-DRIL is alkaline and provides its own pH control in the range of 9 to 10 in fresh water. This feature reduces consumption of caustic soda or other alkalinity agents. In brackish and salt waters, caustic soda or potassium hydroxide are used for alkalinity control.

REDI-DRIL is less damaging to producing zones than conventional muds, and production rates from wells drilled with REDI-DRIL have exceeded expectations. REDI-DRIL also produces a thin, tough, slick filter cake on the wellbore which reduces torque, drag and sticking tendencies.

System pressure losses and pump horsepower requirements are reduced when REDI-DRIL fluids are used. This permits better hydraulics optimization and less stress on the drilling system.

Because REDI-DRIL makes a complete drilling fluid, great savings can be realized in material consumption and related handling, storage, and shipping costs. Ten tons of REDI-DRIL completely



replaces up to 100 tons of bentonite, lignosulfonates, CMC, starch, or similar products. Offshore, REDI-DRIL also does away with the need for hundreds of tons of fresh water for prehydrating bentonite.

RECOMMENDED TREATMENT

REDI-DRIL is normally used in concentrations from 1 to 5 ppb (0.6 to 1.4%) with 3 to 4 ppb (0.8 to 1.1%) being ideal for most applications. Under most conditions, biostatic treatment with a small amount of REDI-CIDE or other microbiocide is recommended.

COMPATIBILITY

REDI-DRIL is compatible with most drilling fluid additives, and can be added as a supplement to conventional systems. REDIFLO-LV, VISFLO EXTRALO, and FILTROL work especially well in conjunction with REDI-DRIL to provide filtration control when no additional viscosity is desired.

LIMITATIONS

Although REDI-DRIL's calcium tolerance is excellent, the product's yield will be reduced in high calcium chloride brines. In sea water systems, precipitation of magnesium with caustic soda will enhance performance.

ENGINEERING

Messina's engineers and technical staff are available to design REDI-DRIL mud programs, provide full engineering services, and to act as consultants to the operators for any drilling program worldwide. Please contact Messina's operational headquarters in Dallas.

PACKAGING

REDI-DRIL is normally packaged in 50 lb or 25 kg net multi-wall bags with moisture barrier.

AUXILIARY PRODUCTS

For especially demanding drilling applications such as high temperatures or when extremely low water loss is required, the REDI-DRIL system can be supplemented by the following specially-designed companion products:

- REDI-X10 for extended high temperature stability
- REDI-FLO for API water loss in 3 to 8 cc range
- REDI-COAT for enhanced solids encapsulation and hole stability
- REDI-pH for supplemental alkalinity in acid-forming environments
- REDI-CIDE for biostatic action

For details on these auxiliary products, please refer to their respective product data sheets.

REDI-DRIL, REDI-X10, REDI-FLO, REDI-pH, REDI-COAT, and REDI-CIDE are Messina Trademarks.