RAPID SWEEP

Water-soluble polymer stick

ADVANTAGES

- Can disperse and does not form "fish eyes"
- Able to be added at the rig floor during connections
- Eliminates the need for liquid polymers and possible slipping hazards on the rig floor
- Enhances hole cleaning and removal of drill solids
- Aids in preventing balling at the bit, on stabilizers, and bottomhole assemblies by encapsulating solids
- Provides a consistent, measured amount of polymer per application
- Promotes consistent usage through ease of use
- Has a lower toxicity than polymers in liquid carriers
- Eliminates loss of product through a convenient re-sealable container

LIMITATIONS

- pH sensitive with an optimum pH range of 8.5-10.0
- Should not be used in muds with total hardness >300 mg/L
- Temperature stable to 275 degF [135 degC]
- More polymer is needed to achieve greater viscosity as salinity increases—is not recommended for saturated brine systems
- Not applicable in oil- or synthetic-base mud systems

The RAPID SWEEP* polymer stick contains a measured quantity of acrylic copolymer in a water-soluble package. It is designed to provide viscosity, reduce friction, encapsulate cuttings, and maintain a limited amount of fluid-loss control in water-base drilling fluids—while at the same time providing a simple way to add copolymer to the drillstring during connections and delivering a consistent method of cleaning the wellbore.

The RAPID SWEEP polymer stick contains a specially-treated acrylic copolymer that can be used in most lightly-treated, low weight water-base mud systems.

Typical Physical Properties	
Physical appearance	Tube filled with solids
Size	11/4 x 15 in
Solubility in water	Soluble

APPLICATIONS

After the RAPID SWEEP polymer stick is added to the drillpipe, the fluid moves down the drillstring and the polymer stick dissolves and shears at the bit, resulting in a high-viscosity sweep that will aid in cleaning the hole and minimize the potential for bit balling.

RAPID SWEEP polymer sticks consist of an acrylic copolymer, soluble paper, and soluble plugs used to encapsulate drill cuttings and provide stabilization of the wellbore by adsorbing onto cuttings and formation surfaces, preventing dispersion. The RAPID SWEEP polymer stick acts as a bentonite extender and viscosifier in low-solids non-dispersed muds, and helps flocculate and settle solids in clear-water drilling. RAPID SWEEP polymer sticks will perform best in freshwater systems.

ENGINEERING GUIDELINE.

- Remove the RAPID SWEEP polymer stick from plastic wrap and place into the open end of the drillpipe.
- It is recommended to add a minimum of one (1) RAPID SWEEP polymer stick each time a new joint of drill pipe is added to the string.
- Adjustments to the number of RAPID SWEEP polymer sticks can be made depending on the ROP, hole size, pump rate, and the desired polymer concentration per sweep. Returns at the flowline should be monitored to judge the effectiveness of the sweeps and to make changes accordingly.
- As the RAPID SWEEP polymer stick travels down the drillpipe, it requires 5-6 minutes of travel time to allow the soluble paper wrapper to dissolve and the polymer to disperse so it can shear at the bit. If the pump rate is too high or there is insufficient free water, it may be possible for the stick to plug the BHA or activate a bypass tool such as the WELL COMMANDER* ball-activated drilling circulating valve.

TOXICITY AND HANDLING

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

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PACKAGING AND STORAGE

RAPID SWEEP polymer sticks are packaged in 6-gal (22.7-L) 38.5-lb (17-kg) plastic buckets, with 20 sticks per bucket. Each stick is packaged individually in a plastic bag and then inserted into a larger plastic bag to prevent moisture absorption.

Ask an Alpine representative about alternative packaging availability in your area. Store in a dry location away from sources of heat or ignition and minimize dust.