

# Rapid Sweep

Rapid Sweep\* polymer stick is a measured quantity of acrylic copolymer contained in a water-soluble package designed to provide viscosity, reduce friction, encapsulate cuttings and provide a limited amount of fluid-loss control in water-base drilling fluids.

Rapid Sweep polymer stick is easily added to the drillstring during connections and provides a consistent method of cleaning the wellbore.

Rapid Sweep polymer stick is a specially treated acrylic copolymer, engineered for a measured application and can be used in water-base mud systems ranging from low solids to weighted muds, using makeup waters from freshwater to saltwater.

## Typical Physical Properties

Physical appearance ..... Tube filled with solids  
 Size ..... 1¼ x 15 in.  
 Solubility in water ..... Soluble

## Applications

Rapid Sweep polymer stick is an engineered application where acrylic copolymer is introduced into the mud system by inserting a polymer stick directly into the drill pipe while making a connection. As the fluid moves down the drill string the polymer stick dissolves and sheers 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 stick consists 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. Rapid Sweep polymer sticks will perform in the presence of salt and freshwater systems. It acts as a bentonite extender and viscosifier in low-solids nondispersed muds. Rapid Sweep polymer stick also helps flocculate and settle solids in clear-water drilling.

- Remove Rapid Sweep polymer from plastic wrap and place into the open end of the drill pipe.
- 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 observed and monitored to judge the effectiveness of the sweeps and to make changes accordingly.

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Eastern Hemisphere  
 Gamle Forusvei 43  
 N-4033 Stavanger,  
 Norway  
 Phone: +47-51-57-73-00  
 Fax: +47-51-57-74-51

Western Hemisphere  
 P.O. Box 42842  
 Houston, Texas 77242-2842  
 Phone: 281-561-1300  
 Fax: 281-561-1441  
 www.miswaco.slb.com



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## Advantages

- Readily dispersible and does not form fish eyes
- Easily 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
- Consistent, measured amount of polymer per application
- Ease of use promotes consistent usage
- Lower toxicity than polymers in liquid carriers
- Convenient re-sealable container eliminates loss of product

## Limitations

- pH sensitive with optimum pH range of 8.5-10.5
- Temperature stable to 275°F (135°C)
- Not applicable in oil-base or synthetic-base mud systems

## Toxicity and Handling

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

## Packaging and Storage

- Rapid Sweep polymer stick is 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 absorption of moisture
- 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.

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Norway  
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