



PENETROL®

Wetting Agent

Description PENETROL wetting agent is a water miscible, non-ionic surfactant designed to counteract the sticking tendencies of clay.

Applications/Functions

The use of PENETROL wetting agent aids the following:

- Reduce or eliminate bit balling
 - Reduce surface tension of drilling fluid, which allows faster chip removal without continuously grinding the hard shale formations
 - Improve drilling efficiency by preferentially coating the bottom-hole assembly and drill string
 - Minimize differential sticking
 - Increase bit life and reduce drill pipe and bottom-hole assembly wear
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Advantages

- Easy to mix
 - Effective in low concentrations
 - Compatible with other Baroid drilling fluid additives
 - Biodegradable
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Typical Properties

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|----------------------------|---------------------|
| • Appearance | forest green liquid |
| • Specific gravity | 0.98 |
| • pH (1%) solution | 9.5 |
| • Flash point, TOC, °F, °C | >300, (149) |
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Recommended Treatment

Added uniformly through entire circulation system

- 1 to 4 quarts of PENETROL wetting agent per 100 gallons of drilling fluid
- 2.5 to 10 liters of PENETROL wetting agent per m³ of drilling fluid

As a slug down drill rods to counteract the sticking tendencies of clay

- 1 to 2 quarts of PENETROL wetting agent per drill rod
- 1 to 2 liters of PENETROL wetting agent per drill rod

Alternate application

- Dilute 1 gallon of PENETROL wetting agent with 10 gallons of water and inject one gallon of mixture per minute into the pump suction
 - Dilute 3.8 liters of PENETROL wetting agent with 38 liters of water and inject 3.8 liters of mixture per minute into the pump suction
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Packaging PENETROL® wetting agent is packaged in 5-gal (19-liter) plastic containers.

Availability PENETROL wetting agent can be purchased through any Baroid Industrial Drilling Products Retailer. To locate the Baroid IDP retailer nearest you contact the Customer Service Department in Houston or your area IDP Sales Representative.

Baroid Industrial Drilling Products

Product Service Line, Halliburton

3000 N. Sam Houston Pkwy. E.

Houston, TX 77032

Customer Service (800) 735-6075 Toll Free (281) 871-4612

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