



PENETROL[®] DRY

Surfactant

Description PENETROL[®] DRY surfactant is used to assist in counteracting the sticking tendencies of encountered clay or shale during drilling operations.

Applications/Functions *The use of PENETROL DRY surfactant aids or promotes the following:*

- Reduces and/or minimizes bit balling
- Improves drilling efficiency by preferentially coating the bottom-hole assembly and drill string
- Minimizes potential for accretion and agglomeration of cuttings

Advantages

- Free-flowing granular product
- Easy to mix and readily dispersible
- Effective at low concentrations
- Minimal to no foaming produced during high shear mixing or surface agitation
- Compatible with other Baroid drilling fluid additives
- Low aquatic toxicity
- NSF/ANSI Standard 60 Certified

Typical Properties

- Appearance White granules
- Bulk Density, lb/ft³, kg/m³ 40 - 45, 641 - 721
- pH (1.0% Aqueous Solution) 6.5

Recommended Treatment

Approximate Amounts of PENETROL DRY Surfactant Added to Water Based Fluids		
lbs/bbl*	lbs/100gal	kg/m ³
0.2 – 1.25	0.5 – 3.0	0.6 – 3.6

*1 bbl = 42 U.S. gallons or 0.16 m³

- It is recommended that Soda Ash (sodium carbonate) be added to the make-up water prior to the addition of PENETROL DRY surfactant for reduction of excess calcium and pH adjustment.
- Introduction of PENETROL DRY surfactant requires the user to incorporate the material into the drilling fluid system using a venturi hopper or directly into the vortex of a high-speed stirrer and follow standard order of addition. PENETROL DRY should be incorporated only after bentonite and/or polymers have been mixed and fully hydrated.
- The above are generalized concentrations of PENETROL DRY surfactant to be added to water-based drilling fluids. The ultimate usage concentration will be based on local geology, application and mixing efficiency. In the event that further information is needed please refer to the Product Data Sheet or contact your local Baroid IDP representative.

Packaging PENETROL DRY surfactant is packaged in 10-lb (4.5-kg) and 37-lb (17-kg) re-sealable plastic pails.

Availability PENETROL DRY surfactant 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
Technical Service	(877) 379-7412 Toll Free	(281) 871-4613