



EZ-MUD[®]

Polymer Emulsion

Description EZ-MUD[®] liquid polymer emulsion containing partially hydrolyzed polyacrylamide/polyacrylate (PHPA) copolymer, is used primarily as a borehole stabilizer to prevent reactive shale and clay from swelling and sloughing. EZ-MUD polymer emulsion is also added to low-solids drilling fluids to increase lubricity, fluid viscosity, and to improve carrying capacity of air/foam injection fluids.

Applications/Functions

- Can stabilize reactive shale and clay formations
- Can improve borehole stability
- Can enhance slurry rheological properties
- Can alleviate mud rings, bit balling and booting-off in clay formations
- Can reduce drill pipe torque and pumping pressure
- Can minimize rod chatter in diamond core drilling
- Can create "stiff-foam" and maintain foam integrity
- Can flocculate non-reactive solids in reserve pit at low concentrations

Advantages

- Mixes easily with minimum shear in fresh water
- Helps provide effective clay and shale stabilization with lower viscosity
- Helps impart high degree of lubricity
- Non-fermenting
- Breaks down chemically with bleach (sodium hypochlorite)
- NSF/ANSI Standard 60 Certified

Typical Properties

• Appearance	Thick, opaque white liquid
• Density	8.5 lb/gal (1.02 g/cm ³)
• pH (1 quart per 100 gallons water)	8.5
• Flash point, PMCC °F, °C	>200 (>93.3)
• Thermal stability, °F, °C	250 (121)

Recommended Treatment

Approximate Amounts of EZ-MUD® Polymer Added to Drilling Fluid System			
Drilling Application/Desired Property	Quarts/100 gal	Pints/bbl	Liters/m³
<i>Added to fresh water (To formulate a clay-free drilling fluid)</i>			
• To stabilize reactive clay and shale	0.5 - 2.0	0.5 - 1.75	1.25 - 5.0
• To retard rod vibration, reduce torque and pumping pressure	1.0 - 2.0	1.0 - 1.75	2.5 - 5.0
<i>Added to QUIK-GEL® or BORE-GEL® Drilling Fluids</i>			
• To retard reactive shale and clay and enhance lubricity	0.5 - 1.0	0.5 - 1.0	1.25 - 2.5
<i>Added to injection liquid in air/foam drilling applications</i>			
• To improve foam performance and hole conditions	0.5 - 1.0	0.5 - 1.0	1.25 - 2.5

Notes:

- Make-up water used to mix EZ-MUD additive should meet the following quality:
total chloride less than 1500 ppm (mg/L)
total hardness less than 150 ppm as calcium
total chlorine less than 50 ppm
water pH between 8.5-9.5
- Reduce total hardness of make-up water by adding soda ash (sodium carbonate) at 0.5 to 1 pound per 100 gallons (0.6 - 1.2 kg/m³) of make-up water.
- EZ-MUD additive can be chemically broken down with liquid bleach in regular household concentration (5% sodium hypochlorite). Use one gallon of liquid bleach per 100 gallons (10 liters/m³) of fluid formulated with EZ-MUD additive. Do not use perfumed liquid bleach or solid calcium hypochlorite.

Packaging EZ-MUD additive is packaged in 5-gal (19-liter) and 1-gal (3.8-liter) plastic containers.

Availability EZ-MUD additive 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

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

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