BAROID GOLONG

AQF-2™ XG

Next Generation Foaming Agent

Description

AQF-2™ XG Next Generation Foaming Agent is an anionic surfactant which can be added to fresh water for air/foam, air/gel-foam, or mist drilling applications.

Applications/Functions

The use of AQF-2 XG Next Generation Foaming Agent promotes or assists with the following:

- Enhance the efficiency of cuttings removal
- · Increase the ability to lift large volumes of water
- Improve hole-cleaning capability of the airstream
- Reduce the sticking tendencies of wet clays, minimizing the risk of mud rings and wall packing
- Reduce erosion of poorly consolidated formations
- Drilling in zones with lost circulation
- Increase borehole stability
- Reduce air-volume requirement

Advantages

- Elevated flash point for easier shipping
- · High quality, high expansion foam with a consistency similar to shaving foam
- High stability with excellent retention time
- Proven product for multi-discipline application
- NSF/ANSI/CAN Standard 60 certified

Typical Properties

Appearance Light yellow, transparent liquid

Specific gravity 1.038 pH (10% solution) 6.5 - 8.5 Flash point $142^{\circ}F$ (61°C)

Recommended Treatment

Approximate Amounts of AQF-2 XG Next Generation Foaming Agent Added to Injection Water

% by Volume	Gallons /100 gal	Quarts /bbl	Liters/m³
0.5 - 2	0.5 - 2 gallons	1.5 - 7 pints	5 - 20

Recommended Treatment (Continued)

Approximate Product Make-ups for Air Drilling Injection Slurries

Injection Slurry	Water (gallons)	QUIK-TROL [®] GOLD polymer (pounds)	EZ-MUD [®] liquid polymer (pints)	AQF-2™ XG foaming agent (% by volume)
Air-Foam Drilling System	100	0 - 1	0 - 2	0.5 - 2

Foam mixing/injection procedure:

Add AQF-2 XG Next Generation Foaming Agent to injection water. Inject into the air stream at a rate necessary to maintain hole stability and penetration rate. Increase amount of AQF-2 XG Next Generation Foaming Agent as required to compensate for downhole water dilution.

To build a stiff-foam drilling system:

Mix QUIK-TROL GOLD polymer (0.5-1 pound per 100 gallons) or EZ-MUD liquid polymer (1-2 pints per 100 gallons) with water before adding AQF-2 XG Next Generation Foaming Agent. Inject into the air stream at a rate necessary to maintain hole stability and penetration rate.

Injection Slurry	Water (gallons)	QUIK-GEL [®] viscosifier (pounds)	QUIK-TROL® GOLD polymer (pounds)	AQF-2 XG foaming agent (% by volume)
Gel-Foam Drilling System	100	12 – 15	1	0.5 - 1

Gel-Foam Mixing/Injection Procedure:

Mix viscosifier and polymer with water before adding AQF-2 XG Next Generation Foaming Agent. Inject into the air stream at a rate necessary to maintain hole stability and penetration rate.

Notes:

- Close product container immediately after use to avoid gelling of remaining AQF-2
 XG Next Generation Foaming Agent.
- Foam and effluent must never be discharged into a stream or waterway. It is the
 end-user's responsibility to contain foam/effluent, cuttings, and production water.
 Utilize hay bales, temporary containment ponds or systems to isolate the foam.

Packaging

AQF-2™ XG Next Generation Foaming Agent is packaged in 5-gal (19-liter) plastic containers or in 55-gal (208 liter) drums.

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