

LFR-20

Friction Reducer

11135-002

General Information:

LFR-20 is an extremely efficient anionic friction reducer for oilfield brines or fresh water. It hydrates very rapidly, even in cold water, to give optimal performance.

Physical Properties:

Density 8.65 lbs. / Gal.
Solubility in water Complete, limited by viscosity
Solubility in Diesel: Dispersible
Color: Translucent white liquid
Odor: Sweet
Flash Point: >200°F
Ionic Charge: Anionic

Chemical Description:

LFR-20 contains anionic acrylamide copolymers and surfactants in a mineral oil base. It is compatible with moderate concentrations of salts and with anionic or nonionic surfactants.

Recommended Uses:

LFR-20 can be used wherever water or brine are pumped in turbulent flow to reduce friction pressure by as much as 50%-60%. The most common applications are in slick water fracs and in coil tubing operations.

Limitations:

LFR-20 is not intended for use in hydrochloric acid. As with most liquid polymer products, LFR-20 may show some settling or free oil after storage, particularly in hot weather. Stirring containers prior to use is a good safeguard to avoid improper product dosing. Protect LFR-20 from freezing temperatures.

Treating Applications:

Normally, loadings of 0.2 to 0.5 gallon of LFR-20 per thousand gallons of fluid will give excellent friction reduction in fresh water or brines. LFR-20 can be batch mixed with moderate agitation, though the preferred method of use is "on the fly".

Packaging:

LFR-20 is obtainable in 55 gallon poly drums, 275 gallon poly totes and bulk storage.



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DOT Information: Not DOT Regulated

Loading Table:

Water	Loading	% Friction Reduction
Tap- Kilgore, TX	1.0 gal	56.5%
Tap- Kilgore, TX	0.5 gal	46.8%
Tap- Kilgore, TX	0.25 gal	44.4%
Tap- Kilgore, TX	0.10 gal	35.5%
Tap- Bryan, TX	0.25 gal	50.0%
Tap- Bryan, TX	0.15 gal	49.2%
5000 mpl Chlorides Mineral Wells area	0.33 gal	36.6%
	0.20 gal	39.3%
10,500 Chlorides	0.50 gal	44.9%
10,000 Chlorides	1.0 gal	50.0%
2,000 ppm Calcium	0.75 gal	51.5%



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