

High Performance Friction Reducers for Hydraulic Fracturing



PRODUCT DESCRIPTION

ProFlo-X220 is a synthetic high molecular weight polyelectrolyte based on polyacrylamide and supplied in easy-to-handle liquid emulsion form. It is a highly efficient friction reducer when used in water-based fracturing fluids and is capable of reducing pressure losses due to friction by amounts in excess of 70%.

APPLICATION

ProFlo-X220 has been specially optimized for use in hydraulic fracturing operations which utilize either light or heavy brines containing predominantly monovalent cationic species in addition to high levels of chlorides, as the frac fluids.

ProFlo-X220 has been designed to hydrate rapidly and may be added as supplied 'on-the-fly' by direct addition to the fracturing fluid. When the products are added to a region of high shear, the hydration of the polymer occurs almost instantaneously, providing optimal performance.

TYPICAL DOSAGE

0.25 to 2.0 gallons per 1000 gallons of frac fluid

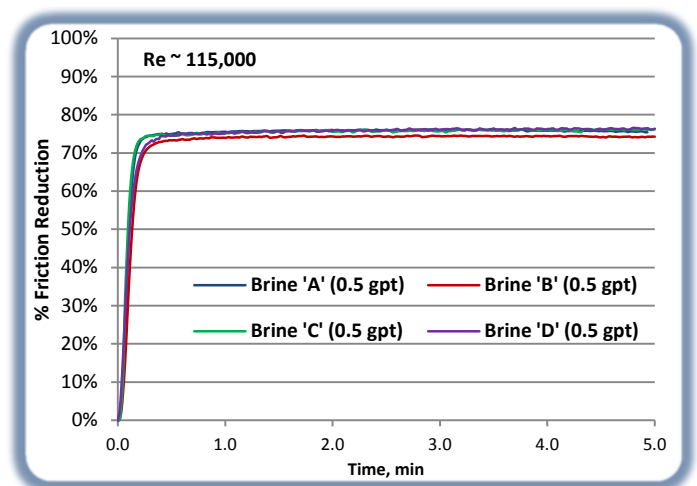
TYPICAL PROPERTIES

Appearance	Opaque Liquid
Ionic Character	Anionic
Specific Gravity	8.8 lbs/gal
Storage Temperature	0 – 35°C / 32 – 95 °F
Shelf Life	6 Months ⁽¹⁾
Pour Point	-30 °C / -22 °F

⁽¹⁾ Shelf life is maximized inside a building at stable temperature between 5 and 30 °C

PERFORMANCE

Typical ProFlo-X220 flow loop performance data *:



Brine	Na ⁺	K ⁺	Cl ⁻	Total, mg/L
A	15,736	0	24,264	40,000
B	25,941	0	40,000	65,941
C	0	20,979	19,021	40,000
D	0	36,713	33,287	70,000

COMPATIBILITY

ProFlo-X220 friction reducer is compatible with all anionic and nonionic additives, such as surfactants or scale inhibitors, that may be present in the frac fluid.

PACKAGING

275 or 330 gal. Tote Bins 2,300 or 2,800 lb
Also Available in Bulk Tank Trucks

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*The level of Friction Reduction experienced in the field may be greater or less depending on actual operating conditions. ProFlo-X220Series/Rev5/06-2012