

High Viscosity Friction Reducer KHF071A

1. Introduction

Friction resistance is high when pumping slick water at high rate for unconventional fracturing. Therefore, friction reducers are generally required for high rate slickwater fracturing.

Normal friction reducers can suspend only 0.5 lbs to 1 lbs per gal of fluid (ppa). In order to suspend higher concentrations of proppant, more viscous friction reducer is needed.

KHF071A is a high viscosity friction reducer (HVFR) that is effective in suspending higher concentrations of proppant and further reduce friction pressure during fracturing operations.

2. Physical Properties and Hazards

Additive	Form	Specific Gravity	Water Solubility	Melting/Flash Point (°C)	Health Hazard	Physical Hazard	pH
KHF071A	Milky to Pale Liquid	1.04-1.10	Soluble	>93	Eyes, Skin	Water Slick	-

3. Chemical Properties and Application

KHF071A is an anionic polyacrylamide polymer in slurry form. The polymer will hydrate into viscous slick water and reduce friction pressure during pumping. More than 70% friction pressure can be reduced using KHF071A. The high molecular weight of KHF071A provides higher viscosity to suspend 3 to 5 ppa of proppant without significant damage of the proppant pack. KHF011 is generally used to break slickwater fluids containing KHF071A.

KHF071A can be used in fresh water or up to 5% potassium chloride brine. It is compatible with most liquid clay stabilizers such as KHF002C. High concentrations of calcium, magnesium and iron in mix water will adversely affect KHF071A performance. KHF071A is not compatible with cationic surfactant and polymers due to its anionic nature.

4. Treatment

KHF071A is generally added at the level of 0.5 to 10 Gal/1,000 Gal for best performance.

5. Packaging

KHF071A is packed in 265 gallons HDPE IBC totes.

Keep it away from extreme conditions such as places near flames or direct sunlight. Store at temperatures lower than 30°C.