

HiRate™ MAXX Liquid Friction Reducer



Delivering lower pumping pressures, higher pump rates with far less product – in nearly half the time.

Innospec Oilfield Services (OFS) offers a variety of solutions to Slickwater fracturing systems. Slickwater stimulation depends largely on the ability to reduce pipe friction, increase pump rates and transport proppant. Slickwater treatments have evolved to include higher viscosity, non-guar fluids to assist with unconventional Slickwater proppant concentrations. Traditional emulsion-based friction reducers, a key component, have reached the limits of their performance and affordability. To solve the challenge of these existing FR limits, OFS innovated an affordable, high efficiency FR that defines new possibilities in Slickwater fracturing.

HiRate MAXX, is our patented ultra-fast hydrating FR systems that incorporate proprietary chemistry to extend friction reduction efficiency

OFS' HiRate MAXX is an invert polymer emulsion-based FR that is specifically designed for significantly improved friction reduction efficiency with ultra-fast inversion. Easy to mix and meter, the HiRate MAXX system— unlike conventional emulsion-based FRs— is based on a higher polymer activity that allows less product per stage; thereby saving operators time, money, and crucial space. HiRate MAXX has a better pressure to rate ratio than the conventional FR's, allowing higher treating rates, with more aggressive sand ramps to save both time and water.

Product Application

HiRate MAXX is an anionic, high molecular weight polyacrylamide performing optimally in fresh water but can be used in some TDS waters to provide cost efficient friction reduction. The high performance, allows lower typical loadings of 0.15-0.75 gpt, creating less chemical pump rate dependency. In a hybrid approach, HiRate MAXX can be used to enhance viscosity, without having to rely on guar-based fluids. Typical hybrid system loadings are 1.0-4.0 gpt in fresh water.

Features

- Provides less pressure using less product compared to conventional emulsion based friction reducers
- Operationally simplistic using chemical additive pumps and not requiring extra equipment on location
- In a hybrid process, enhances fluid viscosity with zero reliance on guar-based fluids providing a simple and safe proppant transport method

Technical Properties

Appearance	Beige liquid
Density	1.12 g/cm ³ (20°C (68°F))
pH	7.2
Flash Point	>93.3°C; >199.9°F
Specific Gravity	1.13
Pour Point	5°F

Storage and Handling

Store in a dry, cool and well-ventilated area, away from incompatible materials. Always wear appropriate protective equipment. Do not get in eyes or on skin or clothing.

About Innospec Oilfield Services (OFS)

An integral part of Innospec (NASDAQ: IOSP), Innospec Oilfield Services (OFS) is headquartered in Englewood, Colorado. The company's presence in North America is a highly focused one: Delivering the best possible chemical technologies and superior efficiencies along with the superior level of service vital to support drilling, completions, and production projects in all major U.S. oil and gas basins.

Founded in 1938, Innospec Inc. has evolved into a leading international specialty chemicals company with approximately 1,900 employees operating in 23 countries. Innospec has major regional centers in the U.S., UK and Singapore, with production plants located in countries including the U.S., UK, France, Germany, Spain, and the Philippines.

Innospec manufactures and supplies a wide range of specialty chemicals to markets in the Americas, Europe, the Middle East, Africa, and Asia-Pacific. In addition to designing, formulating, and producing oilfield chemicals for drilling, completions, and production applications, the company's other business segments are Fuel Specialties, Performance Chemicals and Octane Additives.

Contact Innospec Oilfield Services

For more information on how the Innospec Oilfield Services team can work for you, please contact your regional OFS sales office, or visit us online at www.innospecinc.com.