

# WFR-54LA Friction-Reducing Agent

Reduces friction pressure by up to 70% during hydraulic fracturing operations using fresh or low-TDS water

## Applications

- Hydraulic fracturing operations using slickwater fluids
- Fresh water or water with low levels—less than 20,000 parts per million—of total dissolved solids (TDS)
- Bottomhole temperatures ranging from 100 to 300°F (37.8 to 148.9°C)
- Weatherford AquaVis™ gel system and SureSlick™, DynaFrac™, and MagnumFrac™ fluid systems

## Features and Benefits

- The friction-reducing agent enables rapid hydration (a quick reduction in friction pressure).
- By lowering friction pressure, the agent reduces the horsepower needed at the surface to pump fluids downhole.
- The concentration of the agent ranges from 0.5 to 1.0 gal per 1,000 gal (gpt), or 1.89 to 3.79 L per 3,785 L, of water.
- The agent is non-oil wetting to prevent formation damage.
- The agent is compatible with most stimulation fluid additives. It is not compatible with acid or hard water cations such as calcium and magnesium.

## Product Description

The Weatherford WFR-54LA friction-reducing agent lowers friction pressure by up to 70% in fresh water or water containing low levels of TDS. It is comprised of a unique blend of acrylamide copolymers and surfactants in a mineral oil base.

## Specifications

Specific gravity	1.00 to 1.10
Density	8.34 to 9.18 lb/gal (0.99 to 1.10 kg/L)
Ionic charge	Anionic
Appearance	White opaque liquid
Odor	Mild hydrocarbon
Flash point	>212°F (100°C)
pH	5 to 8
Storage temperature	41 to 95°F (5 to 35°C)

