

Flowback Additive KHF007

1. Introduction

Surface active reagents were generally used in aqueous-based stimulation fluids to lower the interfacial tension that restricts fluid flow in the rock matrix. Surfactant KHF007 lowers the capillary pressure by both improving the wettability of the pore throat and reducing the interfacial tension.

Both laboratory testing and field results have shown that KHF007 can provide superior cleanup due to the wetting properties and surface tension reduction that leads to lower capillary pressures. The use of KHF007 results in less swabbing time, faster cleanup and more complete recovery of stimulation fluids.

2. Physical Properties and Hazards

Additive	Form	Specific Gravity	Water Solubility	Melting/Flash Point (°C)	Health Hazard	Physical Hazard	pH
KHF007	Light-yellow Liquid	1.00-1.05	Soluble	>180	Eyes, Skin, Inhalation	None	-

3. Chemical Properties and Application

KHF007 promotes fracturing fluid cleanup of the proppant pack and the invaded rock matrix because the contact angles resulting from the use of KHF007 are higher than those for other conventional cleanup surfactants. In addition, the surface and interfacial tension values from the use of KHF007 are also lower than most conventional surfactants used. This leads to significantly lower capillary pressures which reduces the force required to initiate flow of the stimulation fluid and therefore, KHF007 delivers faster and more complete fluid recovery after stimulation treatments.

KHF007 is compatible with all additives used in OPT fracturing fluids such as OPTiFrac, MaxFrac and EZFrac. Lab testing indicates that KHF007 can be used for temperature applications up to 350°F.

KHF007 can reduce the surface tension to as low as 19 Dynes/cm.

4. Treatment

The CMC dosage of KHF007 is low. The generally recommended concentration for most fracturing fluids is 1-2 Gal/1,000 Gal.

5. Packaging

KHF007 is supplied in 55 gallons high density polyethylene (HDPE) drums or 265 gallons HDPE totes. Keep it away from extreme conditions such as places near flames or direct sunlight.