

Flowback Surfactant KMA001S

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. KMA001S surfactant 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 KMA001S can provide superior cleanup due to the wetting properties and surface tension reduction that leads to lower capillary pressures. The use of KMA001S results in less swabbing time, faster cleanup and more complete recovery of the stimulation fluids.

2. Physical Properties and Hazards

Additives	Form	S.G.	Water Solubility	Health Hazard	Physical Hazard	pH
KMA001S	Light brownish liquid	1.00-1.05	Soluble	Eyes, skin, inhalation	Fire	N/A

3. Chemical Properties and Application

KMA001S promotes the cleanup of the fluid from the rock matrix because the contact angles resulting from the use of KMA001S are higher than those for other conventional cleanup surfactants. In addition, the surface and interfacial tension values from the use of KMA001S 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, KMA001S should provide better and quicker fluid recovery following a stimulation treatment.

KMA001S are compatible with all additives used in most matrix stimulation and acid fracturing fluids. Lab testing indicates that KMA001S can be used for temperature applications up to 350°F (177°C).

KMA001S can reduce the surface tension to as low as 22 Dynes/cm.

4. Treatment

The CMC value for KMA001S is low. However, 1-2 gal/Mgal is the generally recommended concentration for most stimulation fluids.

5. Packaging

KMA001S is supplied in 55 gallons high density polyethylene (HDPE) drums. Keep it away from extreme conditions such as places near flames or direct sunlight.