

Surfactant KWC018

1. Introduction

Wax or asphaltene deposits introduce various well production problems in daily operational activities. Problems include composite scales (organic and inorganic) in wellbore, matrix or gravel packs and organic deposits around downhole tools, tubulars or other well equipment.

S³ acid is an engineered multi-phase fluid formulated around surfactant KWC018, which acts as an emulsion and dispersion stabilizer as well as a surface wetting agent. Formulated with organic solvents as the external phase and water or acids as the internal phase, this fluid can efficiently remove the above-mentioned inorganic scales and organic deposits in a single-stage treatment.

2. Physical Properties and Hazards

Additive	Form	Specific Gravity	Water Solubility	Melting/Flash Point (°C)	Health Hazard	Physical Hazard	pH
KWC018	Brown Liquid	0.90-0.95	Insoluble	>115	Eyes, Skin, Inhalation	Fire	N/A

3. Chemical Properties and Application

KWC018 introduces the stabilization mechanism to prepare S³ fluid systems on the surface. It functions as surfactant at downhole conditions to reduce the interfacial tension between the acid, oil and formation in order to maximize the scale removal and matrix stimulation efficiency of S³ treatment at temperature up to 275°F.

KWC018 is compatible with other additives used in S³ fluid systems such as KWC029 and corrosion inhibitor if needed. However, additives including non-emulsifiers and corrosion inhibitors must undergo laboratory compatibility tests before mixed with KWC018.

4. Treatment

Typical KWC018 concentrations range from 3 to 5 Gal/1,000 Gal of acids depend on acid type, acid strength, other additives in acids, oil phase and application temperature.

5. Packaging

KWC018 is supplied in 55 gallons high density polyethylene (HDPE) drums.

Keep it away from extreme conditions such as places near flames or direct sunlight.