

Ultra-high Temp. Viscoelastic Surfactant KMA007A

1. Introduction

Fluid and petro-physical heterogeneities are encountered in most sandstone and carbonate formations. Chemical diverter technology is one of the methodologies to be used in stimulation treatment to divert treatment fluids from high permeability zones to low permeability zones.

KMA007A is a non-damaging chemical diverter used in stimulation fluid systems to improve treatment fluid distributions across formation matrix to increase stimulation efficiency.

2. Physical Properties and Hazards

Additive	Form	Specific Gravity	Water Solubility	Melting/Flash Point (°C)	Health Hazard	Physical Hazard	pH (1% in alcoholic solution)
KMA007A	Amber-yellow Liquid	1.00-1.05	Miscible	20	Eyes, Skin	Fire	7.0-8.0

3. Chemical Properties and Application

KMA007A forms viscous micelle structure when its concentration reaches certain level in water or brines. The viscosity of KMA007A VES gel breaks dramatically when it contacts hydrocarbon or crude oils. The in-situ viscous behavior of KMA007A in aqueous solution will divert treatment fluids from high water-cut to low water-cut, from high permeability to low permeability zones of the rock matrix. The matrix is therefore stimulated homogeneously. In 20% CAT acids, KMA007A can be used at temperatures up to 300°F. KMA007A is compatible with most additives in stimulation fluid systems. Some additives such as corrosion inhibitor or solvent may have adverse effect on KMA007A rheological properties. Compatibility testing is generally required when KMA007A is used in stimulation treatment.

4. Treatment

5-10% volume is typically enough for most stimulation jobs. 6% volume is considered the optimum concentration in most fluid design.

5. Packaging

KMA007A 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, direct sunlight and moisture.