Iron Stabilizer KMA003BL

1. Introduction

Ferric and ferrous ions remain in acid solutions due to the low pH of the fresh acids in acidizing treatment. When acid travels from surface to formation, it will dissolve iron from equipment, tubulars, scales and iron minerals in the formation, leading to higher pH and precipitation of iron hydroxides.

Trivalent iron (Ferric) precipitates as iron hydroxide at about pH 3, while the divalent iron (Ferrous) will not precipitate until the acid is spent to pH 8. It is therefore required to add iron stabilizer (reducer) into acid systems to minimize the precipitation of iron hydroxides.

KMA003BL is a high-performance iron stabilizing agent used in acids to prevent the precipitation of iron hydroxides.

2. Physical Properties and Hazards

Additive	Form	Specific Gravity	Water Solubility	Melting/Flash Point (°C)	Health Hazard	Physical Hazard	pH
KMA003BL	Light-yellow Liquid	1.25-1.35	Soluble	>100	Eyes, Skin	Slippery	11.0-12.0 (1%)

3. Chemical Properties and Application

KMA003BL is a chelating agent used in both fresh and spent acids to keep iron in solution instead of precipitation. It can be used for most applicable stimulation fluid systems at various well conditions.

Ferrous iron will not form iron hydroxides until pH 8 while the ferric ion can precipitate into a brownish red mass at pH 3.5. As we know, pH of most spent acids will not be more than pH 6. Therefore, Ferric iron is generally required to be stabilized in solution because it will precipitate as ferric hydroxide at pH above 3. KMA003BL is a high-performance chelating agent to keep ferric iron in acid solutions.

KMA003BL is compatible with most additives in stimulation fluid systems.

4. Treatment

2 to 25 gal/Mgal KMA003BL is typically enough for most cleanup and acidizing jobs. 10 gal/Mgal is considered sufficient in most fluid design.

5. Packaging

KMA003BL is supplied in 55 gallons high density polyethylene (HDPE) drums.

It should be stored in shaded areas with good ventilation. Keep it away from high temperature, humidity and direct sunlight.