

Iron Reducing Agent KMA003

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.

KMA003 is high-performance iron reducing agent used in acids to convert the ferric iron into ferrous iron so that it will prevent ferric hydroxide precipitations.

2. Physical Properties and Hazards

Additive	Form	Specific Gravity	Water Solubility	Melting/Flash Point (°C)	Health Hazard	Physical Hazard	pH
KMA003	White Powder	1.62-1.82	Soluble	-	Eyes, skin	Dust	5.0-8.0 (5%)

3. Chemical Properties and Application

KMA003 is an iron reducing agent used in both fresh and spent acids to keep iron in solution instead of precipitating. It can be used for most applicable stimulation fluid systems at various well conditions.

Ferrous iron will not form iron hydroxides until pH 8. As we know, pH of most spent acids will not be more than pH 6. Therefore, the chance of forming ferric hydroxide precipitation will be dramatically reduced if the ferric iron is converted into ferrous iron.

KMA003 is a high-performance iron reducing agent, which will react with ferric iron in acids and convert it into ferrous iron.

KMA003 is compatible with most additives in stimulation fluid systems.

4. Treatment

15 lbs/Mgal KMA003 is typically enough to control 1000 ppm of ferric iron.

5. Packaging

KMA003 is supplied in plastic-lining bags with net weight of 25 KG/bag.

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