DPA Additive III - KMA012

1. Introduction

Hydrofluoric acids are widely used in oilfields to remove damage in sandstone formations. Hydrofluoric acids in Deep Penetrating Acids (DPA) are released slowly to penetrate longer distance from wellbore before spending. KMA012 and KMA008 are two additives used in DPA acids to provide this chemical mechanism. DPA is specifically designed for stimulation of acid sensitive and high temperature sandstone reservoirs.

2. Physical Properties and Hazards

Additives	Form	S.G.	Water Solubility	Health Hazard	Physical Hazard	pH
KMA012	Colorless crystals	1.40-1.60	Soluble	Eyes, skin	Dust	6.0-7.0(1%)

3. Chemical Properties and Application

KMA012 will react with hydrofluoric molecules in DPA systems to form a new compound which slowly releases hydrofluoric acids during sandstone acidizing.

Due to the slow release of hydrofluoric acids from DPA, there are always limiting amounts of HF molecules available in dissolution of aluminosilicate minerals. Therefore, the reaction rate between DPA and sandstone minerals is dramatically reduced, and acids will penetrate much further from the wellbore. Another unique chemical nature of KMA012 is forming a thin coating around clays and fines and “glue” them in place. Therefore, fines migration is minimized in DPA reacted areas.

KMA012 is compatible with most additives and acid systems for sandstone acidizing.

4. Treatment

1-3% Weight is typically enough for most DPA acidizing design. 2% Weight is considered the optimum concentration in most DPA acidizing treatments.

5. Packaging

KMA012 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.