

Acid Gelling Agent KMA027G

1. Introduction

KMA027G is an effective gelling agent for gelled acid systems. When high concentrations of this cationic polyacrylamide are used with acid, the fluid exhibits viscosity. If we need sufficient viscosity to divert the acid to untreated zones, crosslinking of KMA027G with trivalent metal crosslinkers such as iron is necessary. The viscosity of KMA027G developed in acids will lubricate the interface between tubular and pumping fluids and change the flowing status of the fluids, which leads to lower friction pressure.

2. Physical Properties and Hazards

Additives	Form	S.G.	Water Solubility	Health Hazard	Physical Hazard	pH
KMA027G	White liquid	1.05-1.15	Soluble	Eyes	Dust, water slick	6.0-7.0 (1%)

3. Chemical Properties and Application

KMA027G is a cationic polyacrylamide emulsion in oil that is used in delayed gelled acid formulations. It can be dispersed in acids continuously or batch mixed. KMA027G is compatible with most acid additives including surfactant, corrosion inhibitor, and iron control additives. Typically, the KMA027G concentration used for gelling acids ranges from 20 to 30 gpt and is dependent on the well bottom hole temperature. Formation damage caused by KMA027G is generally minimal because of the de-crosslinker used in the formulation to remove iron when the pH goes above 4 during acid spending.

4. Treatment

The 20 to 30 Gal/Mgal loading is generally used to make Delayed Gelled Acid. The loading level depends on the formation bottom hole temperature and the concentration of acid used. Typically, the higher the temperature is, the higher the loading level is required to achieve the required performance.

5. Packaging

KMA027G is supplied in 55 gallons high density polyethylene (HDPE) drums or 265 gallons HDPE totes. It should be stored in shaded areas with good ventilation. Keep it away from high temperature and direct sunlight.