

Zirconium Crosslinker KHF026

1. Introduction

Crosslinkers are generally introduced to polymer-based fracturing to improve rheological properties of the fracturing fluids. Crosslinker KHF026 is a zirconium chelate crosslinker used for crosslinking guar-based fluids for high temperature applications. Crosslinking of zirconium fluids are temperature dependent.

2. Physical Properties and Hazards

Additives	Form	S.G.	Water Solubility	Health Hazard	Physical Hazard	pH
KHF026	Light yellow liquid	1.15-1.20	Miscible	Moderate- Eyes	Moderate-Fire	5.5-6.5

3. Chemical Properties and Application

Crosslinker KHF026 is a zirconium crosslinker used for crosslinking guar and guar derivative based fracturing fluids. The crosslinking is very slow if KHF026 is added into linear gel (pH 6-8). However, the crosslinking is activated by raising the fluid pH value above 8.5, and it causes rapid crosslinking to occur in HPG and CMHPG fluids. Since crosslinking of zirconium fluids are temperature dependent, higher temperature is needed to crosslink. KHF026 can be used to crosslink most guar or guar derivative based fracturing fluids. It is compatible with most additives used in fracturing fluid systems which are engineered for use up to 375°F.

4. Treatment

Batch mixing KHF026 into the fluid is NOT recommended. If the KHF026 must be batch mixed, it is added only after the polymer is fully hydrated and the fluid pH value is 6 to 6.5. 1.2 to 2.0 Gal/1,000 Gal of KHF026 is generally sufficient to obtain good crosslink property and fluid stability at any temperature.

5. Packaging

KHF026 is supplied in 55 gallons high density polyethylene (HDPE) drums. Keep it away from extreme conditions such as places wet and humid or direct sunlight.