

# Guar Slurry KHF021L

## 1. Introduction

Gelling Agent KHF021L is a high-yielding guar slurry for continuous or batch mixing of fracturing fluids. Its hydration rate is faster compared to guar powder, and is easier to meter, disperse and hydrate in water.

## 2. Physical Properties and Hazards

Additives	Form	S.G.	Water Solubility	Health Hazard	Physical Hazard	pH
KHF021L	Amber liquid	1.06-1.11	Soluble	Eyes, nose, throat	Fire, water slick	N/A

## 3. Chemical Properties and Application

For fracturing applications, specially-treated free-flowing dry guar powder is liked by the operating companies due to the absence of diesel and similar oils. However, its metering and use at the well site are difficult. When mixed with water, these dry guar powder can form fish eyes, and thus many times cannot achieve the desired maximum viscosity on hydration. For this reason, guar powder is slurry in diesel or mineral oils, and provides much better crosslinking properties (viscosity) allowing much lower gel loading and leads to better fracture conductivity.

In addition to proppant carrying in hydraulic fracturing, this slurry can also be used as a pad for both hydraulic and acid fracturing. Together with crosslinker, activator, and the delaying agent, the gelling agent KHF021L provides wide range of delay time and rheological property at temperature and shear. The delay time can vary from 0~3 minutes and the fluid are stable up to 350°F.

The high temperature stabilizer and stabilizer aids can be used to prevent degradation of fracturing fluids at temperatures greater than 200°F (93°C).

## 4. Treatment

Guar Slurry equivalent to 20-40 lbs/1,000 gal guar gel loading is generally required to get enough viscosity to initiate the fracture and transport the proppant in to the fracture. The gel loading is dependent on the formation bottom hole temperature, pumping time, and cool down. Typically, higher the temperature, higher is the gel loading required to achieve the required viscosity.

## 5. Packaging

KHF021L is supplied in 265 gallons high density polyethylene (HDPE) totes. It should be stored in shaded areas with good ventilation. Keep it away from high temperature, fire, humidity and direct sunlight.