

Guar Slurry KHF021L

1. Introduction

Gelling agent is one the most important additives in fracturing fluids to provide enough viscosity for breaking the formation rocks and carrying proppant into the fractures.

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 mix-water.

2. Physical Properties and Hazards

Additive	Form	Specific Gravity	Water Solubility	Melting/Flash Point (°C)	Health Hazard	Physical Hazard	pH
KHF021L	Amber Liquid	1.06-1.11	Soluble	60	Eyes, Nose, Throat	Fire, Water Slick	-

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 is slurried in diesel or mineral oils to provide better crosslinking properties (viscosity) allowing 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 guar slurry KHF021L provides wide range of delay time and rheological property at temperature and shear. The delay time can vary from 0-6 minutes, and the fluid is stable up to 325°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 20-45 lbs/1,000 gal guar gel loading is generally required to get enough viscosity to initiate the fracture and transport the proppant into the fracture. Gel loading varies with factors such as bottom hole temperature and pumping time. The higher is the bottom hole temperature, the more is the gel loading 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.