

Gelling Agent KHF021

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.

Gelling agent KHF021 is a high-yielding dry guar product for continuous or batch mixing of fracturing fluids. Its hydration rate is faster than conventional guar products and it is easier to 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
KHF021	White Powder	1.35-1.55	Soluble	>100	Eyes, Nose, Throat	Fire, Dust, Water Slick	6.5-7.0 (0.6 wt.%)

3. Chemical Properties and Application

KHF021 is a specially treated dry powder of guar that delivers faster hydration rate and higher yielding values after hydration. This higher yield guar generally provides much better crosslinking properties (viscosity) than conventional guar products, allowing much lower gel loading and leads to better fracture conductivity.

Together with crosslinker, activator and the delaying agent, the gelling agent KHF021 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 KHF005 can be used to prevent degradation of fracturing fluids at temperatures greater than 200°F (93°C).

4. Treatment

The 20-45 lbs/1,000 gal 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

KHF021 is supplied in plastic-lining bags with net weight of 25 kg/sack or 900 kg/jumbo bag.

It should be stored in shaded areas with good ventilation. Keep it away from high temperature, humidity and direct sunlight.