

HPG Gelling Agent KHF001

1. Introduction

Gelling Agent KHF001 from OPT is a dispersible hydroxyl propyl guar (HPG) for batch mixing in OPTiFrac fluids. Addition of appropriate crosslinker and stabilizer converts it to the corresponding highly viscous gel fracturing fluid. Its hydration rate is designed for ease of mixing without lumping. It will disperse and hydrate in water at temperatures as low as 33°F [1°C].

2. Physical Properties and Hazards

Additives	Form	S.G.	Water Solubility	Health Hazard	Physical Hazard	pH
KHF001	Light Yellow Powder	1.4-1.6	Soluble	Eyes	Fire, Dust, Water slick	5.5-7.5 (0.5%)

3. Chemical Properties and Application

KHF001 can be used to prepare OPTiFrac fluids in batch mixing. The OPTiFrac fluid application temperature ranges from 80 to 350°F (27 to 177°C). It can be mixed with freshwater and salt water, depending on the application requirement.

Together with crosslinker KHF008, activator KHF009 and the delaying agent KHF010, the gelling agent KHF001 provides wide range of delay time and rheological property at high temperature and pressure. The delay time can vary from 0~6 minutes.

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 20-60 lb/Mgal gel loading is generally required to get enough viscosity to initiate fracture and transport of the proppant in to the fracture. The gel loading is dependent on the formation bottom hole temperature. Typically, higher the temperature, higher the gel loading required to achieve sufficient viscosity.

5. Packaging

KHF001 is supplied in plastic-lined bags with net weight of 25 kg/bag. It should be stored in shaded areas with good ventilation. Keep it away from high temperature, humidity and direct sunlight.