

Liquid Activator KHF009L

1. Introduction

Borate-crosslinked guar based fracturing fluids reaches optimum properties while pH is in the range of 10.5-12.0. Crosslinker itself contains no pH buffer and the crosslinking takes place very slowly. Therefore, liquid activator KHF009L is generally used together with crosslinker in guar based fracturing fluids to accelerate crosslinking and improve fluid viscosity and stability. Liquid activator KHF009L is 50 wt.% solution of the activator KHF009.

2. Physical Properties and Hazards

Additive	Form	Specific Gravity	Water Solubility	Melting/Flash Point (°C)	Health Hazard	Physical Hazard	pH
KHF009L	Clear Viscous Liquid	>1.50	Soluble	-	Eyes, Skin, Inhalation	Corrosive	12.0-14.0 (1 wt.%)

3. Chemical Properties and Application

Liquid activator KHF009L provides the required pH value for crosslinker to crosslink guar or derivatives hydrated in salt or mix-water. It is therefore used together with crosslinker in most guar or guar derivative based fracturing fluids in order to improve fluid rheological properties and temperature stability. The pH value is controlled by KHF009L at the range of 10.5-12.0 at most application conditions.

The guar or guar derivative based fracturing fluids can be stabilized at temperatures up to 325°F (163°C) if the fluid is properly designed.

KHF009L, together with KHF008 and KHF010, is generally blended to prepare crosslinker solutions for most guar or guar derivative-based fracturing fluids such as OPTiFrac systems. It is compatible with all additives used in this system.

4. Treatment

The concentration range for the liquid activator KHF009L is 1.5-3.5 Gal/1,000 Gal of fracturing fluid.

5. Packaging

KHF009L is supplied in 265 gallons high density polyethylene (HDPE) totes.

Keep it away from extreme conditions such as places near flames or direct sunlight.