

Stabilizer KWC025

1. Introduction

GeLock-F is an aqueous-based gel formed from synthetic polymer and organic crosslinkers and is used for water control in naturally fractured reservoirs. It can be applied to both injectors and producers, where a high water-cut is attributed to production through fissures or micro-fractures.

KWC025 is a stabilizer used in GeLock-F system, which can effectively prevent the x-linked gel degradation under high temperature, thus improving the long-term stability and temperature resistance of water shut-off gel GeLock-F.

2. Physical Properties and Hazards

Additive	Form	Specific Gravity	Water Solubility	Melting/Flash Point (°C)	Health Hazard	Physical Hazard	pH
KWC025	White Solid	1.30-1.50	Soluble	170-176	Eyes, Skin	None	5.0-7.0 (5 wt.%)

3. Chemical Properties and Application

Dissolved oxygen is usually present in the formation or wellbore. The dissolved oxygen can degrade linear or crosslinked polymers especially at elevated temperature, resulting in a decrease in GeLock gel viscosity. KWC025 is an oxygen scavenger that can prevent rapid degradation of GeLock-F gel by dissolved oxygen, thereby significantly improving the stability of the GeLock-F systems.

Adding stabilizer KWC025 to the GeLock-F system can raise its upper temperature limit to 300°F.

4. Treatment

0.05-0.3 wt.% of KWC025 is generally used to prepare the GeLock-F fluids.

5. Packaging

KWC025 is supplied in plastic-lined bags with net weight of 25 KG/bag.

It should be stored in shaded areas with good ventilation.