

Retarding Agent KMA026B

1. Introduction

Organic or emulsified acids are often used to acidize or acid fracture the carbonate reservoirs at high temperature. The slow reactions between the acids and carbonate formations help to maximize the worm-holing process and improve the acid efficiency in carbonate acidizing or acid fracturing treatment.

Single phase retarded acid (EcoAcid) can be used as an alternative to emulsified or organic acid systems. It not only provides slow reaction kinetics for optimized worm-holing but also becomes much more cost-effectiveness and environmentally friendly compared with emulsified or organic acids.

KMA026B is one of the retarding agents used in EcoAcid systems to slow down the reactions between acids and formation.

2. Physical Properties and Hazards

Additive	Form	Specific Gravity	Water Solubility	Melting/Flash Point (°C)	Health Hazard	Physical Hazard	pH
KMA026B	Clear to Light-yellow Liquid	0.90-1.00	Soluble	-	Eyes, Skin	None	N/A

3. Chemical Properties and Application

Three mechanisms introduced by KMA026B and other retarding agents into EcoAcid systems make the EcoAcid to be effective in high temperature carbonate acidizing or acid fracturing treatment: (1) slow proton release rate in acid matrix (2) adsorption film around the rock surface to create a barrier between acids and formation (3) synergistic effect between surfactant, corrosion inhibitor and acid diverter.

KMA026B is compatible with most additives in HCl acids. It creates synergistic effects in acid worm-holing process of carbonate formations together with KMA26A, KMA054, KMA033 and KMA001S in EcoAcid systems, which are proved to be effective up to BHST 325°F.

4. Treatment

The recommended concentration range is 10 to 30 gal/1,000 gal (10 to 30 L/m³) of the acid blend depend on acid type, strength, bottom hole temperature, contact time, and other additives in the acids.

5. Packaging

KMA026B is packed in 55 gallons HDPE drum or 265 gallons HDPE IBC tank.

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