

Polymeric Retarder KCM057

1. Introduction

It is challenging to cement long intervals and especially the intervals with greater temperature difference between top and bottom zones. Retarder at enough loading is generally required to provide proper thickening time to cement the bottom zone in order to minimize the job risks with conventional retarder. However, the retarder is actually over-loaded for the top zone at lower temperature, leading to long WOC time and even job failure at the top zones.

The cement slurry with polymeric retarder KCM057 not only provides enough thickening time at high temperature but also develops the compressive strength successfully within the operational timeframe at lower temperature.

2. Physical Properties and Hazards

Additive	Form	S.G.	Water Solubility	Melting/Flash Point (°C)	Health Hazard	Physical Hazard	pH
KCM057	Light-yellow Liquid	1.05-1.15	Soluble	-	Eyes, Skin	None	1.0-2.0

3. Chemical Properties and Application

Polymeric retarders such as KCM057 slow down the cement hydration process through different mechanisms compared with “small molecule” retarders such as KCM007L (organo-phosphonates) and KCM026A (cis-ortho-hydroxyl based), leading to much less sensitivity of KCM057 to temperature.

The cement slurry with polymeric retarder KCM057 not only provides enough thickening time at high temperature (bottom zone) but also develops the compressive strength successfully within the operational time frame at lower temperature (top zone).

4. Treatment

The exact loading of KCM057 depends on additives used in cement slurry, typically 0.05-0.40gal/sack KCM057 is required for temperature range of 150-300°F.

5. Packaging

KCM057 is supplied in 5 gallons high density polyethylene (HDPE) drums or 53 gallons HDPE drums. Keep it away from extreme conditions such as places near flames or direct sunlight.