

## 油井水泥早强剂

## Oil well cement early strength agent

### 产品概述

本品外观为白色、土黄色或灰色的粉末。以有机盐为主体制成。一般加量为 1.5%~4.0%（BWOC）。适用于温度范围 28℃~110℃（BHCT）。适用于常规及低密度水泥。适用于粉煤灰低密度水泥，普通油井水泥及漂珠低密度水泥浆体系。可干混或湿混。

### 性能特点

加速水泥水化反应；  
提高早期强度；  
适用范围广泛；  
良好的配伍性；  
适用温度范围广。

### 技术指标

表 1 油井水泥早强剂理化性能要求

项目	指标
外观	粉末或颗粒
含水率，%	≤ 5.0
细度（0.84mm 筛余），%	≤ 4.0

表 2 加有低温型（30℃）早强剂的水泥浆和水泥石性能要求

项目	指标
游离液，%	≤ 1.0
抗压强度，MPa	≥ 3.5

表 3 加有中温型（52℃）早强剂的水泥浆和水泥石性能要求

项目	指标
游离液，%	≤ 1.0
初始稠度，Bc	≤ 30
稠化时间缩短率，%	≤ 25
抗压强度之比	≥ 1.35

### 产品用途

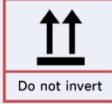
油井水泥早强剂的主要用途是加速水泥水化速度、促进水泥石早期强度的发展、提高水泥浆的早期强度、稳定水泥浆体、减少水泥石的体积收缩、提高水泥浆与地层胶结效等。

具体来说，油井水泥早强剂通过改变水泥水化时的离子浓度，加速水泥组分的溶解，促进 C3S、C3A 的反应和钙矾石的生产，从而使水泥石的结构致密，达到早强或促凝的目的。

早强剂适用于低密度和中低温水泥浆体系，能够激活惰性材料的活性，提高水泥石的早期强度，同时减少水泥石的体积收缩，提高水泥浆的整体性能。

### 包装与贮存

- 25kg/袋，采用三合一复合牛皮纸防潮袋包装。
- 本产品储存保管时应注意防潮、防火、防高温，要求存放在通风、干燥处。
- 保质期：1 年。



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### Product Overview

This product appears as a white, earthy yellow, or gray powder. It is primarily composed of organic salts. The typical dosage is 1.5% to 4.0% (BWOC). It is suitable for use in a temperature range of 28°C to 110°C (BHCT). It is applicable to conventional and low-density cement. It is suitable for fly ash low-density cement, ordinary oil well cement, and floating bead low-density cement slurry systems. It can be mixed dry or wet.

### Characteristics

Accelerate the hydration reaction of cement;  
Improve early strength;  
Wide range of applications;  
Good compatibility;  
It has a wide range of applicable temperature.

### Technical Specification

Table 1 Requirements for Physical and Chemical Properties of Oil Well Cement EarlyStrength Agent

Item	Index
Appearance	Powder or granules
Moisture content，%	≤ 5.0
Fineness (0.84 mm sieve residue)，%	≤ 4.0

Table 2 Requirements for the Performance of Cement Slurry and Set Cement withLow-Temperature (30℃) Early Strength Agent

Item	Index
Fluid loss，%	≤ 1.0
Compressive strength，MPa	≥ 3.5

Table 3 Requirements for the Performance of Cement Slurry and Set Cement withMedium-Temperature (52℃) Early Strength Agent

Item	Index
Fluid loss,%	≤ 1.0
Initial consistency,Bc	≤ 30
Thickening time reduction rate,%	≤ 25
Ratio of compressive strength	≥ 1.35

### Applications

The main purposes of oil well cement early strength agent are to accelerate the hydration rate of cement, promote the development of early strength of cement stone, improve the early strength of cement slurry, stabilize the cement slurry, reduce the volume shrinkage of cement stone, and enhance the bonding effect between cement slurry and the formation, etc.

Specifically, the early strength agent for oil well cement accelerates the dissolution of cement components by altering the ion concentration during cement hydration, promoting the reaction of C3S and C3A and the production of ettringite, thereby densifying the structure of the cement stone and achieving the purpose of early strength or accelerating setting.

Early strength agent is suitable for low-density and moderate-to-low temperature cement slurry systems. It can activate the activity of inert materials, enhance the early strength of cement stone, reduce the volumetric shrinkage of cement stone, and improve the overall performance of the cement slurry.

### Package and Storage

- Package: 25kg/bag, packaged in a three-in-one composite kraft paper moisture-proof bag.
- Storage: When storing and keeping this product, attention should be paid to moisture prevention, fire prevention, and high temperature prevention. It is required to be stored in a ventilated and dry place.
- Shelf - life : one (1) year .