

油井水泥减阻剂 Friction Reducer for Oil Well Cement

产品概述

油井水泥减阻剂外观为黑褐色、棕红色粉末。本品为AMPS、丙烯酸等原料聚合而成的小分子聚合物，易溶于水，随加量增加可明显调节水泥浆流变性，降低水泥浆稠度，更适用于胶乳、共聚物类外加剂配制的水泥浆。本品抗高温性能良好，可使用于30°C~180°C的温度条件下；添加后能使水泥石更加密实，提高抗压强度，并具有一定的降失水作用和缓凝作用，产品可干混或湿混，与其它外加剂配伍良好。



Product Overview

The oil well cement friction reducer appears as a dark brown or reddish-brown powder. It is a low-molecular-weight polymer synthesized from AMPS, acrylic acid, and other monomers. It is easily soluble in water and can significantly adjust the rheological properties of cement slurry with increasing dosage, effectively reducing slurry viscosity. It is especially suitable for cement slurries formulated with latex or copolymer additives. This product exhibits excellent high-temperature resistance and can be used under temperature conditions ranging from 30°C to 180°C. After addition, it helps produce a denser cement matrix, enhances compressive strength, and provides certain fluid loss reduction and retardation effects. It can be used in both dry-blend and wet-blend processes and has good compatibility with other additives.

Characteristics

1. Environmentally friendly and non-toxic.
2. Suitable for high-temperature environments.
3. Effectively improves cementing quality.
4. Reduces energy consumption and enhances operational efficiency.

Technical Specification

Item	Specification			
Appearance	Non-caking powder			
Fineness (residue on 0.315 mm sieve), %	<15.0			
Thickening Curve, Bc / 85°C, 70.3 MPa, 44min	Normal			
Thickening Time Ratio (85°C / 70.3 MPa, 44min)	1.0~2.0			
Rheological Properties (85°C, atmospheric pressure)	n	≥0.50		
	k, Pa·sn	≤0.70		
Compressive Strength Ratio / 110°C, 21 MPa, 24 h	≥0.80			
1: Thickening time ratio: The ratio of thickening time of cement slurry with friction reducer to that of neat cement slurry.				
2: Compressive strength ratio: The ratio of compressive strength of set cement with friction reducer to that of neat cement slurry at the same thickening time.				

Applications

The primary functions of the friction reducer for oil well cement are to reduce pump pressure, improve displacement efficiency, enhance the rheological properties of cement slurry, lower its viscosity, increase compressive strength, and provide a certain retarding effect. The friction reducer adjusts the surface charge of cement particles to achieve optimal rheology, thereby reducing pump pressure and improving displacement efficiency, which facilitates the cementing operation. Additionally, it increases the density of the set cement, enhances its compressive strength, and also offers fluid loss control and mild retardation effects.

Package and Storage

1. Packed in 1.25 kg triple-layer composite kraft paper bags; customizable packaging is available upon customer request.
2. The product should be stored in a cool, dry, and well-ventilated area, protected from moisture, fire, and high temperatures.

产品用途

油井水泥用减阻剂的主要用途是降低泵压、提高顶替效率、改善水泥浆流变性能、降低水泥浆稠度、提高抗压强度和具有一定的缓凝作用。减阻剂通过调节水泥颗粒表面电荷，获得合适的水泥浆流变性，从而降低泵压，提高顶替效率，便于施工。减阻剂还能增加水泥石的密实性，提高抗压强度，并具有一定的降失水作用和缓凝作用。

包装与贮存

1. 25kg/袋，三合一复合牛皮纸袋包装；也可按客户要求包装。
2. 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。



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