

PRODUCT DATA SHEET

GH-10 Retarder for High Temperature Oil Well Cementing**Product Description**

GH-10 is a product formed by the reaction of dicarboxylic acid groups and sulfonate groups with tricalcium aluminate and tricalcium silicate. Through processes like adsorption, chelation, dispersion, and wetting, GH-10 disperses cement particles during the early stage of cement hydration by diffusing the electric double layer. It forms a solvated film with calcium ions on the surface of the cement particles and preferentially adsorbs onto tricalcium aluminate to slow down the hydration process, showing a strong retarding effect. It exhibits weaker adsorption on tricalcium silicate, which ensures the continued development of cement strength in later stages.

Characteristics

- Polymerized from sulfonates, organic acids, etc.
- Typical dosage: 0.3% to 2.5% (BWOC).
- Recommended temperature range: 60°C to 180°C (BHCT).
- Suitable for use in medium and deep wells. It can effectively prolong the thickening time and increase the pumpability time. It can also be used to formulate a right-angle thickening cement slurry system.
- With strong dispersion properties, if settling occurs in the cement slurry, an appropriate amount of G302 (oil well cement fluid loss additive) can be added to adjust it.

Technical Specification

Items	Specification
Appearance	Homogeneous, mildew-free liquid
Initial Consistency, Bc (90°C / 53.3 MPa / 49 min)	≤30.0
Thickening Time (min) (90°C / 53.3 MPa / 49 min)	≥120.0
Mutation Value of Thickening Curve (Bc)	≤10.0
Thickening Time Extension (min)	≥60.0
Sensitivity to Dosage (%)	≤25.0
Temperature Sensitivity (%)	≤20.0
Transition Time (min) (90°C / 53.3 MPa / 49 min)	≤40.0
Free Liquid (90°C), %	≤1.4
Compressive Strength (MPa) (113°C / 21 MPa / 24h)	≥14.0

Packing and Storage

- Packed in plastic barrels, 25 kg/barrel, or as per customer requirements.
- During transportation, care should be taken to avoid damage to packaging.
- Store in a cool, dry place, away from moisture.
- Shelf life: 1 year.

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