



科力奥尔

Tianjin Kelioil Engineering Material and Technology Co.,Ltd.
天 津 科 力 奥 尔 工 程 材 料 技 术 有 限 公 司

Keiloil, the global factory
科力奥尔 全球工厂

www.kelioil.com



CEMENTING ADDITIVE



ABOUT US >>

Established in 2006, Tianjin Keliol Engineering Material and Technology Co., Ltd. is a high-tech enterprise specializing in the independent R&D and large-scale production of oilfield cementing additives. Keliol holds 10 invention patents, 2 software copyrights, as well as certificates such as Green Factory.

KELIOIL R&D Center is headquartered in Universal Enterprise Park, Xiqing District, Tianjin. The production base is located in Ninghe District, Tianjin, with an area of 30,000 square meters, including over 10,000 square meters of workshops. It is equipped with multiple automated production lines for liquid and powder drying, as well as advanced packaging lines. With an annual capacity of about 10,000 tons, KELIOIL meets the demands for multi-variety, small-batch, and customized production.

The main products of KELIOIL are fluid loss additives, which are suitable for low, conventional, and high-density cement slurries, as well as high-temperature and salt-resistant cement slurry systems. Customized solutions, such as low-temperature accelerators and seawater-resistant additives, etc., are also available. These products are widely used in major oilfields across China and exported to many countries and regions.

Main Instruments and Equipment:

Testing Instruments: Full set of testing instruments of its own brand, NITHONS, a Sino-Japanese joint-venture.

Equipment for Liquid Products: Full set of intelligent controlled manufacturing equipment for oil engineering materials, which can realize automatic production from batching, synthesis to filling continuously.

Equipment for Powder Products: One set of high speed centrifugal spray driers, four sets of high speed disintegrator, one set of German IVA ultrafine grinding machine and one set of solid blender.

Equipment for Packaging: Three sets of eco-friendly dust-free automatic packaging lines of its own brand, NITHONS, a Sino-Japanese joint-venture.



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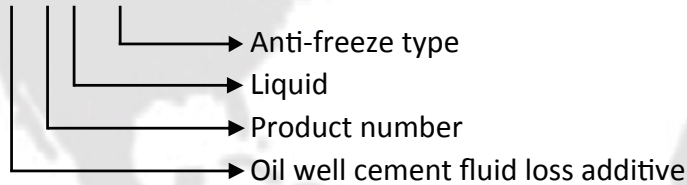
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OILWELL CEMENT ADDITIVE NOMENCLATURE

Example of nomenclature for fluid loss additives

Type		Product Number	Physical State		Specification
Fluid Loss Additive	CG	CG117	L	Liquid	Standard
					A Anti-freeze type
			S	Powder	P High purity type (Dry & water mixed dual purpose)
			CG610	L	Liquid
					A Anti-freeze type
			S	Powder	P High purity type (Dry & water mixed dual purpose)
CG910	S	Powder	Water mixed		

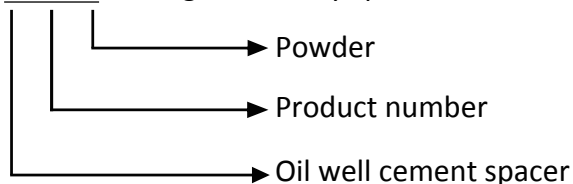
Example: CG610L—A ——— Polymer Fluid loss additive anti-freeze type liquid

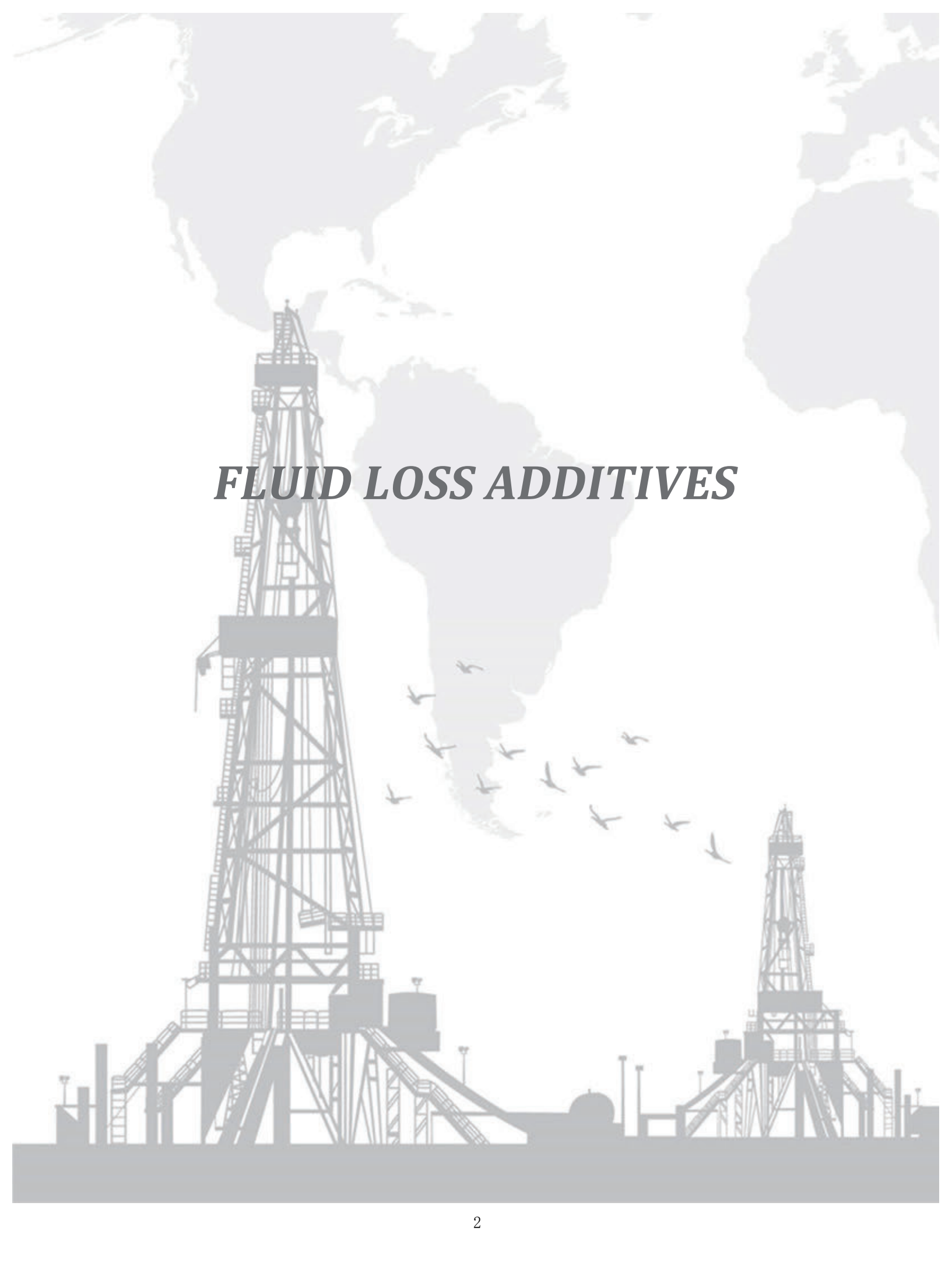


Example of nomenclature for other products

Type		Product Number	Physical State		Specification
Retarder	CH	610	L	Liquid	Standard
					A Anti-freeze type
			S	Powder	P High purity type (Dry & water mixed dual purpose)
		210	L	Liquid	Standard
Washing Agent	CW	110	L	Liquid	Standard
Spacer Additive	CS	210	L	Liquid	Standard
			S	Powder	Standard
Defoamer	CX	410	L	Liquid	Standard

Example: CS210S ——— High efficiency spacer additive



The background of the page is a light gray illustration. At the top, there is a faint world map. In the center, a flock of birds is shown in flight, moving from left to right. At the bottom, there are two detailed silhouettes of oil drilling rigs. The rig on the left is larger and more complex, while the one on the right is smaller. Between the rigs, there are some smaller structures and pipes.

FLUID LOSS ADDITIVES

SUMMARY

- CG310 fluid loss additive is a synthetic polymer which is capable of effectively reducing water loss filtering from the slurry to porous formation during cementing process.
- Applicable for low-to-moderate temperature oil well cementing, cost-effective.
- Control fluid loss in normal density cement slurries, lightweight or high density cement slurries.
- Applicable mixing water: from fresh water to half-saturated salt water.
- Used below temperature of 150°C (302°F, BHCT).
- Compatible well with other additives.
- CG310 series contains of L-type liquid, L-A type anti-freezing liquid and S-P type powder.
- Recommended dosage is 2.0-6.0(BWOC) for liquid products, and 0.6-2.5% (BWOC) for powder product.

PHYSICAL AND CHEMICAL INDICATORS

CG310S-P	CG310L
Appearance : White or faint yellow powder	Appearance: Colorless or faint yellow liquid
Bulk Density, g/cm³: 0.80±0.20	Density, g/cm³: 1.10±0.05(L), 1.15±0.05(L-A)
Water-Solubility: Soluble	Water-Solubility: Soluble

CEMENT SLURRY PERFORMANCE

Item		Test Condition	Technical Indicator
Density of the cement slurry, g/cm ³		25°C, Atmospheric Pressure	1.90±0.01
Fluid loss, ml	Fresh water system	80°C, 6.9MPa	≤50
	18% salt water system	90°C, 6.9MPa	≤150
Thickening performance	Initial consistency, Bc	80°C/45min, 46.5MPa	≤30
	40-100 Bc thickening time, min		≤40
Free fluid, %		80°C, Atmospheric Pressure	≤1.4
24h compressive strength, MPa			≥14

PACKING AND STORAGE

- The liquid type products should be used within 12 months after production. Packed in 25kg, 200L and 5 US gallon plastic barrels. The powder type products should be used within 24 months after production. Packed in 25kg bag.
- Customized packages are also available.
- Once expired, it shall be tested before use.

CG610 General Fluid Loss Additive



SUMMARY

- CG610 fluid loss additive is a synthetic polymer which is capable of effectively reducing water loss filtering from the slurry to porous formation during cementing process.
- Applicable for medium and high temperature wells.
- Control fluid loss in lightweight, normal density or high density cement slurries.
- Applicable mixing water: from fresh water to salt-saturated water.
- Used below temperature of 204.4°C (400°F, BHCT).
- Compatible well with other additives.
- CG610 series contains of L-type liquid, L-A type anti-freezing liquid and S-P type powder.
- Recommended dosage is 2.0-6.0(BWOC) for liquid products, and 0.6-2.5% (BWOC) for powder product.

PHYSICAL AND CHEMICAL INDICATORS

CG610S-P	CG610L
Appearance : White or faint yellow powder	Appearance: Colorless or faint yellow liquid
Bulk Density, g/cm³: 0.80±0.20	Density, g/cm³: 1.10±0.05(L), 1.15±0.05(L-A)
Water-Solubility: Soluble	Water-Solubility: Soluble

CEMENT SLURRY PERFORMANCE

Item		Test Condition	Technical Indicator
Density of the cement slurry, g/cm ³		25℃ Atmospheric Pressure	1.90±0.01
Fluid loss, ml	Fresh water system	80℃, 6.9MPa	≤50
		120℃, 6.9MPa	≤50
	18% salt water system	90℃, 6.9MPa	≤150
Thickening performance	Initial consistency, Bc	80℃/45min,46.5MPa	≤30
	40-100 Bc thickening time, min		≤40
Free fluid, %		80℃, Atmospheric Pressure	≤1.4
24h compressive strength, MPa			≥14

PACKING AND STORAGE

- The liquid type products should be used within 12 months after production. Packed in 25kg, 200L and 5 US gallon plastic barrels. The powder type products should be used within 24 months after production. Packed in 25kg bag.
- Customized packages are also available.
- Once expired, it shall be tested before use.

CG811 HT Fluid Loss Additives

SUMMARY

- CG811 fluid loss additive is a synthetic polymer which is capable of effectively reducing water loss filtering from the slurry to porous formation during cementing process.
- Applicable in high and ultra-high temperature wells.
- Control fluid loss in normal density cement slurries and lightweight cement slurries.
- Applicable mixing water: from fresh water to saturated salt water.
- Help to prevent shear thinning at high temperature, and keep slurry stability cooperatively.
- Compatible with high temperature retarders.
- Used below temperature of 204°C(400°F, BHCT).
- CG811 series contains of L-type liquid and S-P type powder.
- Recommended dosage is 2.0-6.0 (BWOC) for liquid products, and 0.6-2.5% (BWOC) for powder product.

PHYSICAL AND CHEMICAL INDICATORS

CG811S-P	CG811L
Appearance : White or faint yellow powder	Appearance: Colorless or faint yellow liquid
Bulk Density, g/cm³: 0.80±0.20	Density, g/cm³: 1.10±0.05(L), 1.15±0.05(L-A)
Water-Solubility: Soluble	Water-Solubility: Soluble

CEMENT SLURRY PERFORMANCE

Item		Test Condition	Technical Indicator
Density of the cement slurry, g/cm ³		25°C, Atmospheric Pressure	1.90±0.01
Fluid loss,ml	Fresh water system	150°C, 6.9MPa	≤50
	18% salt water system	120°C, 6.9MPa	≤150
Thickening performance	Initial consistency, Bc	150°C/73min,94.4MPa	≤30
	40-100 Bc thickening time, min		≤40
	Free fluid, %		≤1.4
24h compressive strength, MPa		150°C, 20.7MPa	≥14

PACKING AND STORAGE

- The liquid type products should be used within 12 months after production. Packed in 25kg, 200L and 5 US gallon plastic barrels. The powder type products should be used within 24 months after production. Packed in 25kg bag.
- Customized packages are also available.
- Once expired, it shall be tested before use.

CG210 Anti-settling Type Fluid Loss Additives



SUMMARY

- CG210 fluid loss additive is a synthetic polymer which is capable of effectively reducing water loss filtering from the slurry to porous formation during cementing process.
- Specially designed for lightweight cement slurry system and normal density cement slurry with strong dispersity.
- Generate thickening effect on cement slurry, enhance its suspension stability and prevent sedimentation.
- Applicable mixing water: from fresh water to half-saturated salt water.
- Used below temperature of 120 °C (248°F, BHCT).
- Compatible with other additives.
- CG210 series contains of L-type liquid and S-P type powder.
- Recommended dosage is 2.0-6.0 (BWOC) for liquid products, and 0.6-2.5% (BWOC) for powder product.

PHYSICAL AND CHEMICAL INDICATORS

CG210S-P	CG210L
Appearance : White or faint yellow powder	Appearance: Colorless or faint yellow liquid
Bulk Density, g/cm³: 0.80±0.20	Density, g/cm³: 1.10±0.05(L), 1.15±0.05(L-A)
Water-Solubility: Soluble	Water-Solubility: Soluble

CEMENT SLURRY PERFORMANCE

Item		Test Condition	Technical Indicator
Density of the lightweight cement slurry, g/cm ³		25°C, Atmospheric Pressure	1.50±0.01
Fluid loss,ml	Fresh water system	80°C, 6.9MPa	≤50
Thickening performance	Initial consistency, Bc	80°C/45min,46.5MPa	≤30
	40-100 Bc thickening time, min		≤40
Free fluid, %		80°C, Atmospheric Pressure	≤1.4
24h compressive strength, MPa	Lightweight cement slurry		≥5.0

PACKING AND STORAGE

- The liquid type products should be used within 12 months after production. Packed in 25kg, 200L and 5 US gallon plastic barrels. The powder type products should be used within 24 months after production. Packed in 25kg bag.
- Customized packages are also available.
- Once expired, it shall be tested before use.

CG212 Anti-settling Fluid Loss Additives



SUMMARY

- CG212 fluid loss additive is a synthetic polymer which is capable of effectively reducing water loss filtering from the slurry to porous formation during cementing process.
- Specially designed for lightweight cement slurry system and normal density cement slurry with strong dispersity.
- Generate thickening effect on cement slurry, enhance its suspension stability and prevent sedimentation.
- The lightweight cement slurries applied with FLA CG212 products exhibit good thickening performance.
- Fast compressive strength development of set cement.
- Applicable mixing water: from fresh water to half-saturated salt water.
- Used below temperature of 180°C(356°F, BHCT).
- Compatible with other additives.
- CG212 series contains of L-type liquid, L-A type anti-freezing liquid and S-P type powder.
- Recommended dosage is 2.0-6.0 (BWOC) for liquid products, and 0.6-2.5% (BWOC) for powder product.

PHYSICAL AND CHEMICAL INDICATORS

CG212S-P	CG212L
Appearance: White or faint yellow powder	Appearance: Colorless or faint yellow liquid
Bulk Density, g/cm³: 0.80±0.20	Density, g/cm³: 1.10±0.05(L), 1.15±0.05(L-A)
Water-Solubility: Soluble	Water-Solubility: Soluble

CEMENT SLURRY PERFORMANCE

Item		Test Condition	Technical Indicator
Density of the lightweight cement slurry, g/cm ³		25°C, Atmospheric Pressure	1.35±0.01
Fluid loss, ml	Fresh water system	80°C, 6.9MPa	≤80
Thickening performance	Initial consistency, Bc	80°C/45min, 46.5MPa	≤30
	40-100 Bc thickening time, min		≤40
Free fluid, %		80°C, Atmospheric Pressure	≤1.4
24h compressive strength, MPa	Lightweight cement slurry		≥5.0

PACKING AND STORAGE

- The liquid type products should be used within 12 months after production. Packed in 25kg, 200L and 5 US gallon plastic barrels. The powder type products should be used within 24 months after production. Packed in 25kg bag.
- Customized packages are also available.
- Once expired, it shall be tested before use.

CG214 Anti-settling Type Fluid Loss Additives



SUMMARY

- CG214 fluid loss additive is a synthetic polymer which is capable of effectively reducing water loss filtering from the slurry to porous formation during cementing process.
- Specially designed for lightweight cement slurry system and normal density cement slurry with strong dispersity.
- Enhance suspension stability, maintain good liquidity of cement slurries and prevent them from sedimentation.
- Thickening time decreases with increasing temperature, and the compressive strength of set cement develops fast.
- Help control gas migration during the setting of cement slurry.
- Applicable in fresh water slurries, seawater slurries, and slurries containing 2% CaCl_2 .
- Used below temperature of 180°C (356°F , BHCT).
- Compatible with other additives.
- CG214 series contains of L-type liquid, L-A type anti-freezing liquid and S-P type powder.
- Recommended dosage is 2.0-6.0 (BWOC) for liquid products, and 0.6-2.5% (BWOC) for powder product.

PHYSICAL AND CHEMICAL INDICATORS

CG214S-P	CG214L
Appearance: White or faint yellow powder	Appearance: Colorless or faint yellow liquid
Bulk Density, g/cm^3: 0.80 ± 0.20	Density, g/cm^3: 1.10 ± 0.05 (L), 1.15 ± 0.05 (L-A)
Water-Solubility: Soluble	Water-Solubility: Soluble

CEMENT SLURRY PERFORMANCE

Item		Test Condition	Technical Indicator
Density of the lightweight cement slurry, g/cm ³		25°C, Atmospheric Pressure	1.35±0.01
Density of Dyckerhoff cement slurry with strong dispersity, g/cm ³			1.90±0.01
Fluid loss,ml	Fresh water system	52°C, 6.9MPa	≤60
	Seawater system	80°C, 6.9MPa	≤100
	Slurry containing 2% CaCl ₂		≤80
Thickening performance	Initial consistency, Bc	52°C/28min,35.9MPa	≤30
	40-100 Bc thickening time, min		≤40
Free fluid, %		80°C, Atmospheric Pressure	≤1.4
24h compressive strength, MPa	Lightweight cement slurry		≥5.0
	Cement slurry with strong dispersity		≥14.0

PACKING AND STORAGE

- The liquid type products should be used within 12 months after production. Packed in 25kg, 200L and 5 US gallon plastic barrels. The powder type products should be used within 24 months after production. Packed in 25kg bag. Once expired, it shall be tested before use.
- Customized packages are also available.

CG116 Dispersed Type Fluid Loss Additives

SUMMARY

- CG116 fluid loss additive is a synthetic polymer which is capable of effectively reducing water loss filtering from the slurry to porous formation during cementing process.
- Control fluid loss in both normal and high density cement slurries.
- CG116 exhibits strong dispersing property, which helps to reduce the dosage of dispersant.
- Short thickening time and fast compressive strength development of set cement.
- Short setting transition time and help control gas migration while cement is setting.
- Applicable mixing water: from fresh water to half-saturated salt water.
- Used below temperature of 180°C(356°F, BHCT).
- Compatible with other additives.
- CG116 series contains of L-type liquid and S-P type powder.
- Recommended dosage is 2.0-6.0 (BWOC) for liquid products, and 0.6-2.5% (BWOC) for powder product.

PHYSICAL AND CHEMICAL INDICATORS

CG116S-P	CG116L
Appearance: Black or brown powder	Appearance: Black or brown liquid
Bulk Density, g/cm³: 0.80±0.20	Density, g/cm³: 1.10±0.05(L), 1.15±0.05(L-A)
Water-Solubility: Soluble	Water-Solubility: Soluble

CEMENT SLURRY PERFORMANCE

Item		Test Condition	Technical Indicator
Density of normal cement slurry, g/cm ³		25°C, Atmospheric Pressure	1.90±0.01
Density of heavyweight cement slurry, g/cm ³			2.20±0.01
Fluid loss,ml	Fresh water system	80°C, 6.9MPa	≤80
Thickening performance	Initial consistency, Bc	80°C/45min,46.5MPa	≤30
	40-100 Bc thickening time, min		≤20
Free fluid, %		80°C, Atmospheric Pressure	≤1.4
24h compressive strength, MPa			≥14

PACKING AND STORAGE

- The liquid type products should be used within 12 months after production. Packed in 25kg, 200L and 5 US gallon plastic barrels. The powder type products should be used within 24 months after production. Packed in 25kg bag.
- Customized packages are also available.
- Once expired, it shall be tested before use.

FL116 Seawater Resistant Fluid loss additives



SUMMARY

- Fluid loss additives are added to reduce uncontrolled water loss from the slurry into the porous formation.
- Temperature Range: below the temperature of 180°C (356°F, BHCT).
- Disperse the slurry and help to control rheological behavior of cement slurry to prevent sedimentation and gelation problem.
- No adverse influence to the thickening time of cement slurry in the working temperature range and shorten the transition time.
- Assist in preventing anti-gas channeling.
- Applicable mixing water: fresh water and sea water.
- Compatible well with other additives in cement slurry.
- Soluble in cold water, water mixed when applied and water quality is not required.
- FL116 series contains of L-type liquid, L-A type anti-freezing liquid and S-P type powder.
- Recommended dosage is 2.0-8.0 (BWOC) for liquid products, and 0.7-2.5% (BWOC) for powder product.

PHYSICAL AND CHEMICAL INDICATORS

FL116S-P	FL116L
Appearance: Black or brown powder	Appearance: Black or brown liquid
Bulk Density, g/cm³: 0.80±0.20	Density, g/cm³: 1.10±0.05(L), 1.15±0.05(L-A)
Water-Solubility: Soluble	Water-Solubility: Soluble

CEMENT SLURRY PERFORMANCE

Item		Test Condition	Technical Indicator
Fluid loss,ml	Fresh water system	80°C, 6.9MPa	≤50
	seawater system		≤80
Thickening	Initial consistency, Bc	80°C/45min, 46.5MPa	≤30
performance	40-100 Bc thickening time, min		≤20
Free fluid, %		80°C, Atmospheric Pressure	≤1.4
24h compressive strength, MPa			≥14

PACKING AND STORAGE

- The liquid type products should be used within 12 months after production. Packed in 25kg, 200L and 5 US gallon plastic barrels. The powder type products should be used within 24 months after production. Packed in 25kg bag.
- Customized packages are also available.
- Once expired, it shall be tested before use.

CG117 Seawater-resistant Type Fluid Loss Additives



SUMMARY

- CG117 fluid loss additive is a synthetic polymer which is capable of effectively reducing water loss filtering from the slurry to porous formation during cementing process.
- Control fluid loss in both normal and high density cement slurries.
- With slightly weaker dispersion, maintain suspension stability of cement slurries.
- Shorten thickening time and enhance the early strength development of cement stone, helping in preventing gas migration.
- The fluidity of cement slurry in seawater system could keep normal, and fluid loss performance is good too.
- Applicable in fresh water slurries, seawater slurries and slurries containing 2% CaCl₂.
- Used below temperature of 180°C(356°F, BHCT).
- Compatible well with other additives.
- CG117 series contains of L-type liquid, L-A type anti-freezing liquid and S-P type powder.
- Recommended dosage is 2.0-6.0 (BWOC) for liquid products, and 0.6-2.5% (BWOC) for powder product.

PHYSICAL AND CHEMICAL INDICATORS

CG117S-P	CG117L
Appearance : Black or brown powder	Appearance: Black or brown liquid
Bulk Density, g/cm³: 0.80±0.20	Density, g/cm³: 1.10±0.05(L), 1.15±0.05(L-A)
Water-Solubility: Soluble	Water-Solubility: Soluble

CEMENT SLURRY PERFORMANCE

Item		Test Condition	Technical Indicator
Density of heavyweight cement slurry, g/cm ³		25°C, Atmospheric Pressure	2.20±0.01
Fluid loss,ml	Fresh water slurry	80°C, 6.9MPa	≤80
	Seawater slurry		≤100
	Slurry containing 2% CaCl ₂		≤80
Thickening performance	Initial consistency, Bc	80°C/45min,46.5MPa	≤30
	40-100 Bc thickening time, min		≤20
Free fluid, %		80°C, Atmospheric Pressure	≤1.4
Compressive strength for 24h, MPa			≥14

PACKING AND STORAGE

- The liquid type products should be used within 12 months after production. Packed in 25kg, 200L and 5 US gallon plastic barrels. The powder type products should be used within 24 months after production. Packed in 25kg bag.
- Customized packages are also available.
- Once expired, it shall be tested before use.

CG613 Anti-inversion Fluid Loss Additives



SUMMARY

- CG613 fluid loss additive is a synthetic polymer which is capable of effectively reducing water loss filtering from the slurry to porous formation during cementing process.
- While maintaining good fluid loss performance, solve the inverted defects of common polymer-based fluid loss additives to prevent the reversal of thickening time and strength.
- Mainly suitable for normal density cement slurry system.
- Applicable for fresh water cement slurry systems.
- Applicable temperature: below 180°C (356°F, BHCT).
- Compatible well with other additives.
- CG613 series contains of L-type liquid, L-A type anti-freezing liquid and S-P type powder.
- Recommended dosage is 2.0-6.0 (BWOC) for liquid products, and 0.6-2.5% (BWOC) for powder product.

PHYSICAL AND CHEMICAL INDICATORS

CG613S-P	CG613L
Appearance: White or faint yellow powder	Appearance: Colorless or faint yellow liquid
Bulk Density, g/cm³: 0.80±0.20	Density, g/cm³: 1.10±0.05(L), 1.15±0.05(L-A)
Water-Solubility: Soluble	Water-Solubility: Soluble

CEMENT SLURRY PERFORMANCE

Item		Test Condition	Technical Indicator
Density of the cement slurry, g/cm³		25°C, Atmospheric Pressure	1.90±0.01
Fluid loss, ml	Fresh water system	80°C, 6.9MPa	≤50
Thickening performance	Initial consistency, Bc	80°C/45min, 46.5MPa	≤30
	40-100 Bc thickening time, min		≤40
Free fluid, %		80°C, Atmospheric Pressure	≤1.4
24h compressive strength, MPa			≥14

PACKING AND STORAGE

- The liquid type products should be used within 12 months after production. Packed in 25kg, 200L and 5 US gallon plastic barrels. The powder type products should be used within 24 months after production. Packed in 25kg bag.
- Customized packages are also available.
- Once expired, it shall be tested before use.

CG910S Low Temperature Coagulation Promoting Type Fluid Loss Additives

SUMMARY

- CG910S product has the dual-effects of reducing fluid loss and accelerating coagulation at low temperature. It effectively shortens the thickening time at low temperature while maintaining good fluid loss reduction performance.
- Transition time of thickening performance and setting performance are short.
- Promote the early strength development of setting cement at low temperature.
- Suitable for normal density, low density and high density cement slurry systems.
- Used below temperature of 60°C (140°F, BHCT) .
- Compatible well with other additives.
- Only suitable for water mixed use.
- Recommended dosage range is 1.2-2.5% (BWOC).

PHYSICAL AND CHEMICAL INDICATORS

CG910S-P
Appearance: White or faint yellow powder
Bulk Density, g/cm³: 0.90±0.10
Water-Solubility: Soluble

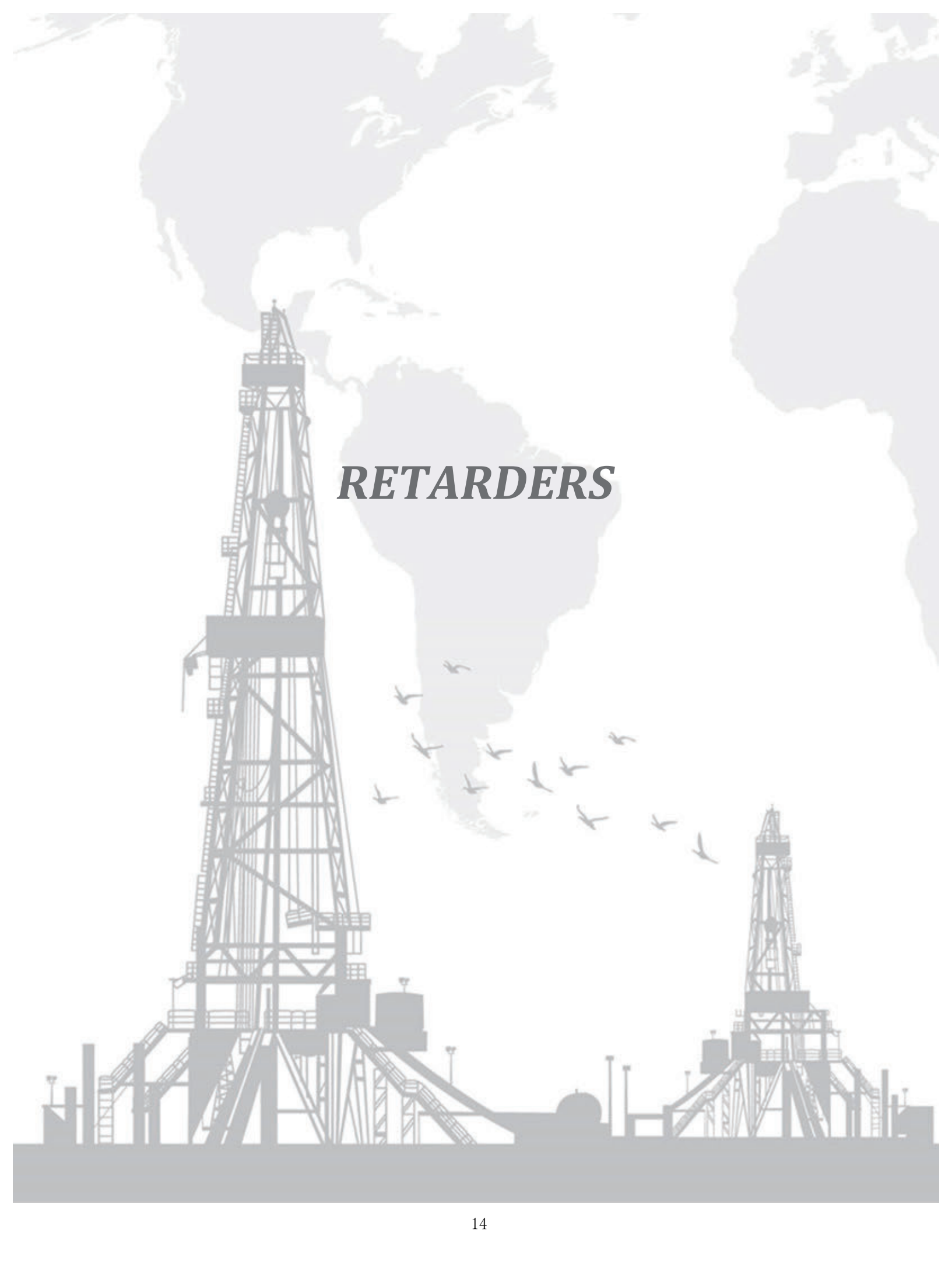
CEMENT SLURRY PERFORMANCE

Item		Test Condition	Technical Indicator
Density of normal density cement slurry (g/cm ³)		25°C, Atmospheric Pressure	1.90±0.01
Fluid loss, ml	Fresh water system	40°C, 6 9MPa	≤50
Thickening performance	Initial consistency (Bc)	40°C/28min, 24MPa	≤30
	40-100 Bc thickening time, min		≤20
	Ratio of thickening time		≤0.6
Free fluid (%)		40°C, Atmospheric Pressure	≤1.4
Compressive strength for 8h, MPa			≥5.0
Compressive strength for 24h, MPa			≥14

Note: The ratio of thickening time refers to the ratio of thickening time of cement slurry with CG910S to the thickening time of pure cement slurry without any fluid loss additive.

PACKING AND STORAGE

- Product shelf life is 12 months. Packed in 25kg bags, or according to customer requirements.
- Once expired, it shall be tested before use.



RETARDERS

CH610 HT POLYMER RETARDER



SUMMARY

- Retarder helps extend the thickening time of cement slurry in order to keep it pumpable, which, therefore, ensures sufficient pumping time for a safe cementing project.
- Thickening time has a linear relation with the added amount. The Right-Angle thickening curve can be achieved, and mutation of slurry consistency is small.
- Strength of set cement develops fast, and the top of the sealing section will not over-retarded.
- Use below 150°C (302°F, BHCT) .
- Has good compatibility with polymer fluid loss additive, and little influence on fluid loss performance at high temperature.
- CH610 series contains of L-type liquid, L-A type anti-freezing liquid and S-P type powder.
- Recommended dosage is 2.0-8.0 (BWOC) for liquid products, and 0.5-2.5% (BWOC) for powder product.

PHYSICAL AND CHEMICAL INDICATORS

CH610S-P	CH610L
Appearance : White or faint yellow powder	Appearance : Colorless or faint yellow liquid
Bulk Density, g/cm³ : 0.80±0.20	Density, g/cm³ : 1.10±0.05(L), 1.15±0.05(L-A)
Water-Solubility : Soluble	Water-Solubility : Soluble

CEMENT SLURRY PERFORMANCE

Item		Test Condition	Technical Indicator
Thickening performance	Initial consistency, Bc	150°C/73min, 94.4MPa	≤30
	40-100Bc thickening time, min		≤40
	Thickening time adjustability		Adjustable
	Sudden change value of consistency, Bc		≤10
Free fluid, %		150°C/73min, 94.4MPa	≤1.4
Compressive strength for 24h, MPa		150°C, 20.7MPa	≥14
Composition: API Class G(HSR) 600g, silica flour 210g(35%), silica fume 36g(6%), mixed water 342g (including liquid additives), defoamer 1.8g(0.3%), CH610.			
Note: The dosage of CH610 is determined under the precondition of adjusting the thickening time range of cement slurry at 150°C to 200—375 min.			

PACKING AND STORAGE

- The liquid type products should be used within 12 months after production. Packed in 25kg, 200L and 5 US gallon plastic barrels. The powder type products should be used within 24 months after production. Packed in 25kg bag.
- Customized packages are also available.
- Once expired, it shall be tested before use.

SUMMARY

- Retarder helps extend the thickening time of cement slurry in order to keep it pumpable, which, therefore, ensures sufficient pumping time for a safe cementing project.
- Thickening time has a linear relation with the added amount. The Right-Angle thickening curve can be achieved, and mutation of slurry consistency is small.
- Strength of set cement develops well.
- Use below 204.4°C (400°F, BHCT) .
- Has good compatibility with polymer fluid loss additive, and little influence on fluid loss performance at high temperature.
- CH710 series contains of L-type liquid, L-A type anti-freezing liquid and S-P type powder.
- Recommended dosage is 2.0-8.0 (BWOC) for liquid products, and 0.5-2.5% (BWOC) for powder product.

PHYSICAL AND CHEMICAL INDICATORS

CH710S-P	CH710L
Appearance: White or faint yellow powder	Appearance: Colorless or faint yellow liquid
Bulk Density, g/cm³: 0.80±0.20	Density, g/cm³: 1.10±0.05(L), 1.15±0.05(L-A)
Water-Solubility: Soluble	Water-Solubility: Soluble

CEMENT SLURRY PERFORMANCE

Item		Test Condition	Technical Indicator
Thickening performance	Initial consistency, Bc	180°C/86min, 115MPa	≤30
	40-100Bc thickening time, min		≤40
	Thickening time adjustability		Adjustable
	Sudden change value of consistency, Bc		≤10
Free fluid, %		180°C/86min, 115MPa	≤1.4
Compressive strength for 24h, MPa		180°C, 20.7MPa	≥14
Composition: API Class G(HSR) 600g, silica flour 210g(35%), silica fume 36g(6%), mixed water 342g (including liquid additives), defoamer 1.8g(0.3%), CH710.			
Note: The dosage of CH710 is determined under the precondition of adjusting the thickening time range of cement slurry at 180 °C to 230—420 min.			

PACKING AND STORAGE

- The liquid type products should be used within 12 months after production. Packed in 25kg, 200L and 5 US gallon plastic barrels. The powder type products should be used within 24 months after production. Packed in 25kg bag.
- Customized packages are also available.
- Once expired, it shall be tested before use.

CH210L MT RETARDER LIQUID



SUMMARY

- Retarder helps extend the thickening time of cement slurry in order to keep it pumpable, which, therefore, ensures sufficient pumping time for a safe cementing project.
- Applicable for low-to-moderate temperature system, used below 90°C (194°F, BHCT).
- Mixed with water when applied, and water quality is not required.
- When curing temperature is lower than bottom hole circulating temperature, strength of set cement at top may be affected.
- The dosage of CH210L increases significantly when applied above temperature of 95°C, strength of set cement at top may be affected.

PHYSICAL AND CHEMICAL INDICATORS

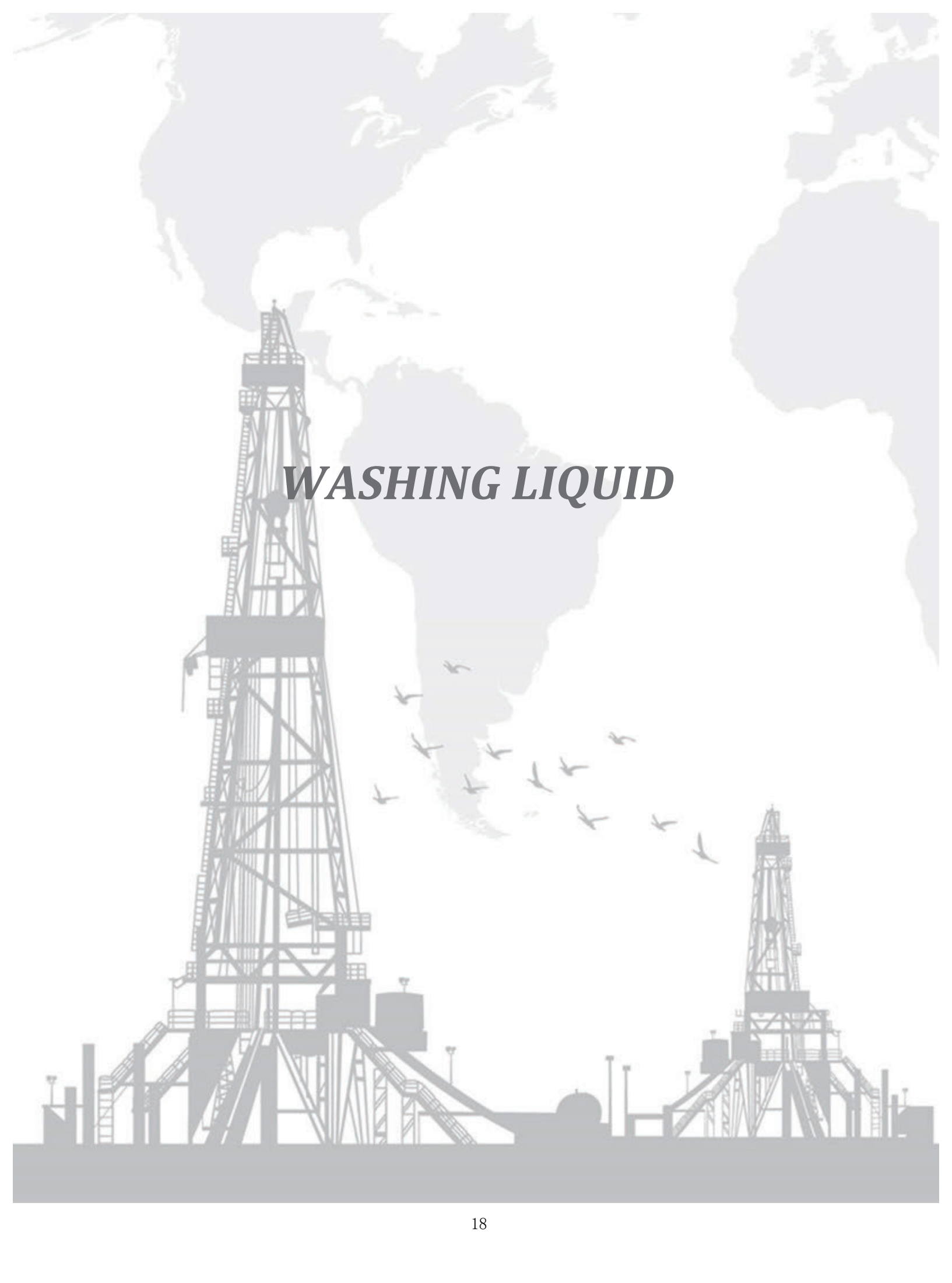
CH210L
Appearance: Colorless liquid
Bulk Density, g/cm³: 1.10±0.05
Water-Solubility: Soluble

CEMENT SLURRY PERFORMANCE

Item		Test Condition	Technical Indicator
Thickening performance	Initial consistency, Bc	80°C/45min, 46.5MPa	≤30
	40-100Bc thickening time, min		≤40
	Thickening time adjustability		Adjustable
	Sudden change value of consistency, Bc		Normal
Free fluid , %		80°C, Atmospheric	≤1.4
24h compressive strength, MPa		80°C, 20.7MPa	≥14
Composition: API Class G (HSR) 700g; mixed water 308g (including); defoamer 1.4g (0.2%); CH210L.			
Remarks: the dosage of CH210L is determined under the precondition of adjusting the thickening time range of cement slurry from 130—270 min at 80°C.			

PACKING AND STORAGE

- The liquid type products should be used within 12 months after production. Packed in 25kg, 200L and 5 US gallon plastic barrels.
- Customized packages are also available.
- Once expired, it shall be tested before use.



WASHING LIQUID

CW110L COMPOUND TYPE AND NON-PHOSPHORUS WASHING LIQUID

SUMMARY

- Washing agent can effectively disperse and wash away the mud cake on the well wall, significantly increase the displacement efficiency and enhance cementation power between set cement and the wall.
- Use below the temperature of 180°C(356°F, BHCT).
- Compound washing liquid featured with non-phosphorus, non-toxic and low-foaming characteristics, mainly applied as washing and spacing agents during the process of oil well cementing where water-based drilling fluid is applied. Good performance can be achieved as well when applied in oil-based drilling fluid.
- In case of making new washing liquid by using CW110L, compatibility test should be conducted beforehand.
- Washing liquid cannot be made by applying CW110L with mixing water that contains other additives or high concentration of salt. Or negative outcomes may arise due to the incompatibility.
- Long time storage may result in muddy and blurry appearance of CW110L, which is normal and has no influence on its performance.

PHYSICAL AND CHEMICAL INDICATORS

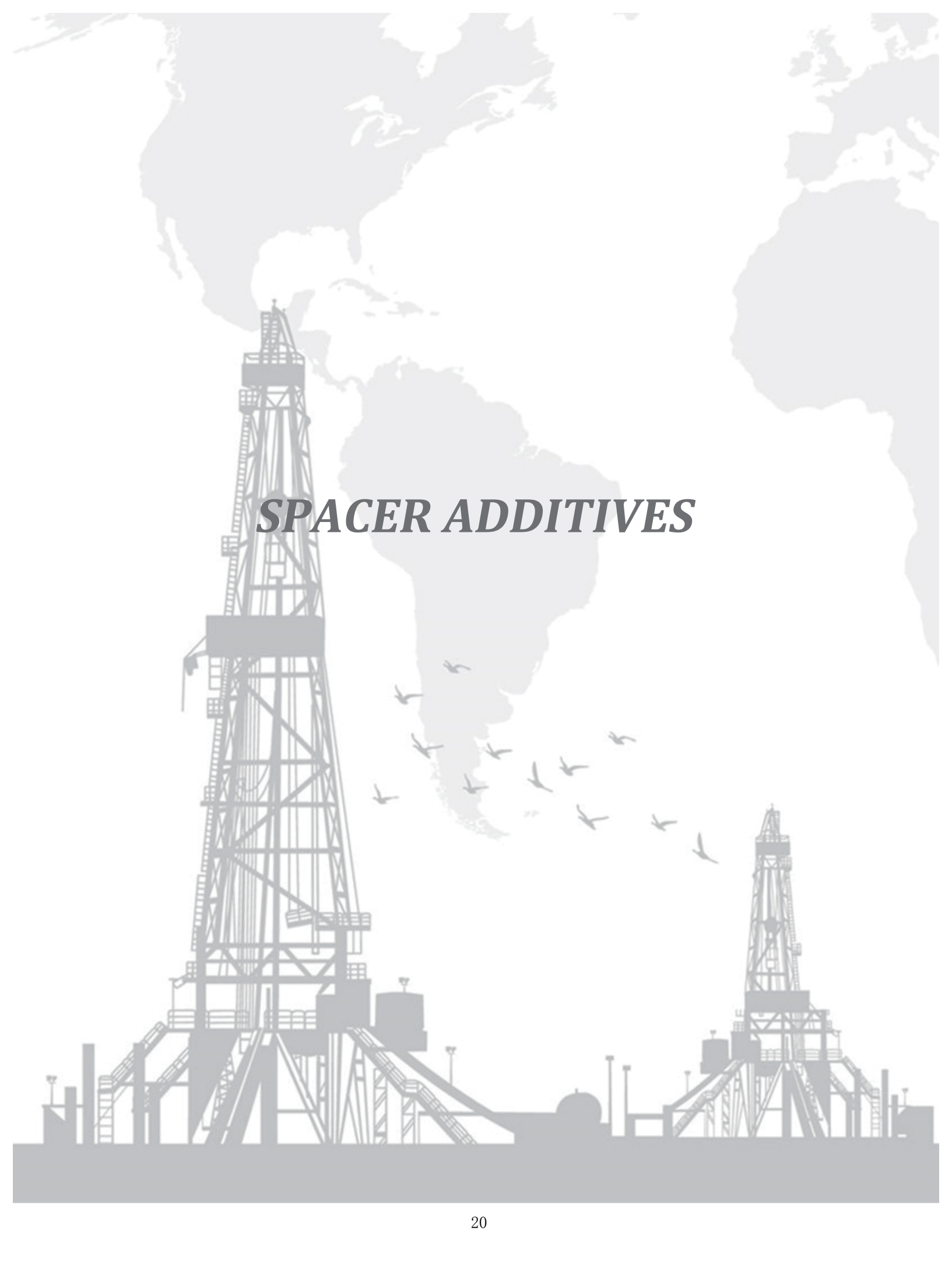
CW110L
Appearance: Pink viscous liquid
Density, g/cm³: 1.40±0.05
Water-Solubility: Soluble

CEMENT SLURRY PERFORMANCE

Item	Test Condition	Technical Indicator
Washing efficiency on the surface of casing pipe (10min) , %	Rotating speed of fans viscometer with rotor crude-treated is 300r/min (remove the internal vats), solution temperature≥38°C	≥60
Washing liquid prescription	Fresh water 600g,Washing liquid CW110L is Generally dosed at 2.0-6.0% (BWOW), recommended dosing 4.0% (BWOW).	

PACKING AND STORAGE

- Use within 12 months after production. Once expired,it shall be tested before use to confirm the quality.
- Packed in 25kg , 200L or 5 US gallon plastic barrels. Customized packages are also available.

The background of the page is a light gray illustration. At the top, there is a faint world map. In the center, the text "SPACER ADDITIVES" is written in a bold, italicized, serif font. Below the text, there are two detailed silhouettes of oil drilling rigs. A flock of birds is shown in flight, moving from the left rig towards the right rig. The entire scene is set against a white background.

SPACER ADDITIVES

CS210L HIGH EFFICIENCY SPACER ADDITIVE LIQUID



SUMMARY

- Spacer additive, which can remove drilling fluid effectively, is able to prevent cement slurry from blending with it.
- Used below temperature of 150°C (302°F, BHCT).
- Remarkable thickening effect with high viscosity, good performance of suspension on weighing agent, insoluble solid and oil drop.
- Slurries Compatibility test should be done before applying CS210L.
- Direct application of CS210L is highly recommended as viscosity reduces drastically after being diluted.

PHYSICAL AND CHEMICAL INDICATORS

CS210L
Appearance: Faint yellow and viscous liquid
Density, g/cm³: 1.10±0.10
Water-Solubility: Soluble

CEMENT SLURRY PERFORMANCE

Item	Test Condition	Technical Indicator
Marsh funnel viscosity, s	Marsh Funnel	≥200
Viscosity, mPa·s	Viscometer	≥5000

PACKING AND STORAGE

- Customized packages are also available. Used within 12 months after production. Once expired, it shall be tested before use.
- Packed in 25kg, 200L and 5 US gallon plastic barrels. Customized packages are also available.

SUMMARY

- Spacer additive, which can remove drilling fluid effectively, is able to prevent cement slurry from blending with it.
- Used below temperature of 120°C (248°F, BHCT).
- Remarkable thickening effect and high viscosity with low-concentration. Good suspension effect on the weighing agents, insoluble solids and oil drops.
- Good synergy performance, can be used with other thickening agents.
- Good thickening effect, suspending ability and stability. Easy to be dissolved and applied in water.
- Compatibility test should be done before use.
- Has thickening effect on cement slurry under certain conditions, therefore, appropriate amount of chemical inert spacing agents should be applied to separate from the cement slurry. Fresh water or mixing water can be applied as chemical inert spacing agent.

PHYSICAL AND CHEMICAL INDICATORS

CS210S
Appearance: Faint yellow powder
Density, g/cm³: 1.10±0.10
Water-Solubility: Soluble

CEMENT SLURRY PERFORMANCE

Item	Test Condition	Technical Indicator
Marsh funnel viscosity, s	Marsh Funnel	≥200
Viscosity, mPa·s	Viscometer	≥5000
Spacer agent prescription	Fresh water 1600g + Spacer agent CS210S generally dosed at 0.5-4.0% (BWOW), recommended dosing 2.0% (BWOW).	

PACKING AND STORAGE

- Used within 24 months after production. Once expired, it shall be tested before use.
- Packed in 25kg bag. Customized packages are also available.

DEFOAMER

CX410L DEFOAMER LIQUID

SUMMARY

- High efficient foam preventer which can quickly eliminate the foam generated in the cement slurry. Good inhibitive and degassing effect.
- Disperses well in the cement slurry, and inhibits foam from being produced by other additives.
- Has minimal effect on other properties of cement slurry.
- Product dosage range 0.2-0.8% (BWOC).

PHYSICAL AND CHEMICAL INDICATORS

CX410L
Appearance: Colorless or faint yellow transparent liquid
Density, g/cm³: 1.03±0.05
Water-Solubility: Dispersed in water

CEMENT SLURRY PERFORMANCE

Item	Test Condition	Technical Indicator
The difference in cement slurry density, g/cm ³ (The difference between the density of cement slurry with defoaming agent and without defoaming agent)	Room temperature, atmospheric pressure	≥0.02

PACKING AND STORAGE

- Used within 12 months after production. Once expired, it shall be tested before use.
- Packed in 25kg, 200L and 5 US gallon plastic barrels. Customized packages are also available.



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