



LIST OF CEMENT ADDITIVES

BDC – 011	Cement retarder up to 90°C
BDC – 013	Cement retarder up to 120°C
BDC – 031	Filtrate control additive
BDC – 042	Cement dispersant and friction reducer
BDC – 043	Cement friction reducer
BDC – 101 GAS SEAL	Anti - gas migration additive
DEFOAMER – T	Defoaming agent



BDC-011

CEMENT RETARDER

Description: **BDC-011** is a purified calcium lignosulphonate derived from fermented spruce wood sulphite liquor.

BDC-011 is a light brown water-soluble powder.

Application: **BDC-011** is a basic retarder for cement slurries that retards the thickening time of the slurries at temperatures ranging from 0°C to 90°C.

BDC-011 is compatible with all classes of API and POZMIX cement.

BDC-011 as a basic retarder also acts as a mild dispersant.

BDC-011 is effective in fresh and (saturated) salt water.

BDC-011 can be dry blended with cement or prehydrated into the mixing water.

Recommended

dosage: **BDC-011** can be used in concentrations of 0.1% to 1.0% bwoc subject to cement quality, type and brand.

Properties:	Dry matter	%	min. 93.0
	pH (10% solution)		ca. 4.3
	Insolubles	%	max 0.8
	Calcium	%	5
	Sulphur	%	7
	Bulk density		550 - 630 kg/m ³

Storage: **BDC-011** must be stored inside at room temperatures.

Packaging: 25 kg multiply paper bags.

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BDC-013

CEMENT RETARDER

Description: **BDC-013** is a sodium oxy lignin derived from fermented spruce wood sulphite liquor.

Application: **BDC-013** is a basic retarder for cement slurries that retards the thickening time of the slurries at temperatures ranging from 80°C to 120°C.
BDC-013 is compatible with all classes of API and POZMIX cement.
BDC-013 as a basic retarder also acts as a mild dispersant.
BDC-013 is effective in fresh and salt water.
BDC-013 can be dry blended with cement or prehydrated into the mixing water.

Recommended

dosage: **BDC-013** can be used in concentrations of 0.1 to 2.0% bwoc subject to cement quality, type and brand.

Properties:	Dry matter	min. 93.0%
	Physical form	dark brown water-soluble powder
	pH	ca. 8.5
	Insolubles (w/w)	max. 0.07%
	Sodium	8%
	Sulphur	3%
	Bulk density	approx 650 kg/m ³

Storage: **BDC-013** must be stored inside at room temperatures.

Packaging: 25 kg multiply paper bags.

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BDC-031

FILTRATE CONTROL ADDITIVE

Description: BDC-031 is a hydroxy ethyl cellulose polymer.

Application: BDC-031 provides filtrate control in slurries containing salt concentrations up to about 18% by weight in the mix water.

Temperature limit: about 100°C.

BDC-031 also acts as a cement retarder at moderate temperatures.

Recommended

dosage: BDC-031 can be used in concentrations of 0.4% to 1.5% bwoc.

Properties/

Specification: Physical form	off-white powder
Solubility	soluble in water of any temperature
Ionicity	non-ionic
Moisture	6 % as packed
Grade	300 mPa.s
Range	400-700 mPa.s

Storage: BDC-031 must be stored inside at room temperatures.

Packaging: 25kg paper bags

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BDC-042

CEMENT DISPERSANT AND FRICTION REDUCER

Description: BDC-042 is a sulphonated naphthalene-polycondensate polymer.

Application: BDC-042 is a cement friction-reducing additive which will reduce the apparent viscosity and improve the rheological properties of cement slurry, resulting in reduced frictional pressures during pumping. With a reduction in slurry's apparent viscosity, the slurry can be mixed at a higher density than normal by reducing the mixing water.

BDC-042 improves fluid-loss control and has a light retardation effect.

BDC-042 is effective at temperatures higher than 15°C.

BDC-042 tolerates salt up to maximum 18% bwow.

BDC-042 is compatible with all classes of API-cements.

Recommended

dosage: BDC-042 can be used in concentrations of 0.1% to 1.5% bwoc

Properties:	Physical form	brown to dark brown powder
	Moisture	<4.0 %
	pH value	6.0 to 9.0 (20% solution)
	Bulk density	500 to 850 kg/m ³

Storage: BDC-042 must be stored inside at room temperatures.

Packaging: 25 kg paper bags.

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BDC-043

CEMENT FRICTION REDUCER

Description: **BDC-043** is a sulphonated organic polymer 60-100%

Application: **BDC-043** is a cement friction-reducing additive which will reduce the apparent viscosity and improve the rheological properties of cement slurry.

BDC-043 is highly salt respectively electrolyte tolerant, and can be used in slurries with salt concentrations greater than 18% bwow.

BDC-043 is compatible to all common fluid loss polymers.

BDC-043 is effective at temperatures higher than 15 °C.

BDC-043 is compatible with all classes of API-cement.

Recommended

dosage: **BDC-043** can be used in concentrations of 0.3% to 1.5%. bwow.

Properties:	Physical form	red-brown powder
	Moisture	<4.5%
	pH value	8 – 11
	Brookfield viscosity	<100 cP
	Solubility	soluble in water

Storage: **BDC-043** must be stored inside at room temperatures.

Packaging: 50 lbs paper bags.

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BDC 101 GAS SEAL

ANTI-GAS MIGRATION ADDITIVE

Description: BDC 101 GAS SEAL is a cationic polyethyleniminacetate polymer solution in water.

Application: BDC 101 GAS SEAL is effective in cement slurries to control or prevent gas migration after primary cementing and is also recommended as an additive in critical cement plugs.

BDC 101 GAS SEAL is compatible with all classes of API cement.

BDC 101 GAS SEAL tolerates salt concentrations up to saturation.

BDC 101 GAS SEAL is effective at temperatures ranging from 0 to 100 °C.

BDC 101 GAS SEAL does not coagulate.

Recommended

dosage: From 5 to 20 liters per 100 kg of cement. Normally 10 liters are more than sufficient depending however on type, brand and quality of the cement. Laboratory testing, under simulated field conditions, is essential to determine the correct slurry composition.

Properties:	Appearance	clear yellowish liquid
	Active content	ca. 40%
	Charge	strongly cationic
	Density	ca. 1100 kg/m ³
	Viscosity	max. 4500 mPa.s
	pH value	ca. 7.5

Storage: BDC 101 GAS SEAL to be stored preferable inside at room temperatures. Open containers must be tightly closed.

Packaging: 1000 liters (1050 kg) IBC's or 120kg drums

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DEFOAMER-T

DEFOAMING AGENT

Description: DEFOAMER-T is an antifoaming additive based on **tributylphosphate**.

Application: DEFOAMER-T is a defoamer for drilling fluids and cement slurries. The product has a defoaming and foam preventing action. It prevents the formation of foam or destroys it immediately if added when foaming has commenced. DEFOAMER-T as an all- purpose defoamer can be used in a broad range of temperatures and salt concentrations.

Recommended

dosage: Since DEFOAMER-T additions depend primarily on the extend of foam development, the required amount must be determined individually for each application. Generally speaking addition rates range from 0.01% to 0.5%.

Properties:	Colour	: colourless.
	Density	: 0.97 g/cm ³ at 20 degr. C
	Solubility in water	: 0.4 g/l
	Boiling point	: 130 °C at 5mbar.
	Viscosity	: 3.5-4 mPa.s

Storage: DEFOAMER-T must be stored inside at room temperatures.

Packaging: 25/50 kg drums and 1000 kg containers.

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