

Lock Veb

LOCK VEB is a mixture of natural cellulose materials of various shapes and sizes and intended for seal off loss zones while drilling. Product is suitable for all types of drilling muds.

Typical Physical Properties

Appearance:	A mixture of flake-like, fibrous and granular substances of brown colour
Bulk density, SG:	0.2-0.7
Solubility in water:	Insoluble
Solubility in 10% HCl:	Insoluble

Fractional composition (passing sieve, %)

	Fine	Medium	Coarse
Less than 5 mesh (4,000 µm)	100	100	95-100
Less than 10 mesh (2,000 µm)	70-90	60-80	50-70
Less than 18 mesh (1,000 µm)	60-80	20-40	10-20
Less than 35 mesh (500 µm)	40-50	0-20	0-10
Less than 60 mesh (140 µm)	10-30	0	0

Applications

LOCK-VEB is a mixture of clogging agents to prevent the loss of circulation of water-based drilling muds. Fine fraction (LOCK-VEB FINE) is used to reduce the filtration of drilling mud when drilling both in porous formations and in formations with fracture permeability with small fracture sizes. The recommended concentration is 5-15 kg/m³.

A medium-sized grinding mixture (LOCK-VEB MEDIUM) demonstrates high performance in sealing small to medium-sized fractures and porous formations and can be pumped through large and medium-sized bit nozzles. The recommended concentration is 20-40 kg/m³.

A mixture of coarse grinding (LOCK-VEB COARSE) is used to seal large fractures and highly permeable formations. LOCK-VEB COARSE is recommended for pumping through by-pass subs or through an open-ended drilling string. The recommended concentration is 80-120 kg/m³.

If it is necessary to circulate through the shale shakers dress shakers with coarse mesh screen (the standard size is no more than 24 mesh). The performance of the LOCK VEB is ensured by mixing various types of fillers – granular ones work as arching particles, flakes as a clogging agent and fibers as a binding material. LOCK-VEB mixture should be introduced into the drilling mud through a funnel or fed directly into the suction of the rig pumps.

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Eastern Hemisphere
Gamle Forusvei 43
N-4033 Stavanger,
Norway
Phone: +47-51-57-73-00
Fax: +47-51-57-74-51

Western Hemisphere
P.O. Box 42842
Houston, Texas 77242-2842
Phone: 281-561-1300
Fax: 281-561-1441
www.miswaco.slb.com



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Advantages

- Widely available mixture of natural cellulose materials
- Can be used in any type of drilling mud
- High sealing capacity in LCM sweeps
- Wide range of application temperatures
- Wide range of particles size

Limitations

- Take care with high concentrations of the ingredient in the mud due to its high clogging capacity.
- Pumping through the downhole equipment and product concentrations only as agreed with the customer.
- Individual polymer fibers in medium and coarse fractions of the mixture can partially dissolve in the hydrocarbon base.

Toxicity and Handling

The product is classified as a low-hazard substance. Handle as an industrial chemical, use protective equipment and observe the precautions specified in the material safety data sheet. Not dangerous, not toxic.

Packaging and Storage

The material is packaged in 20 kg multi-layer paper bags.

Store in a dry, well-ventilated area in closed containers. Keep away from heat or fire sources. Minimize dust.

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