

TECHNICAL DATA SHEET

Lost Circulation Material (LCM) — plant-based, sunflower husk

Product description

LCM of the KL series is a fibrous plant-based material produced from processed sunflower husk. It is used to seal and prevent lost circulation zones while drilling, both in rotary drilling and with downhole motors. The material is inert to water-based and oil-based mud systems, does not cake in storage and is fully biodegradable.

Grades and particle size

Grade	Particle size	Typical application
KL	0 – 0.5 mm	Fine seepage losses, filtration control
KL-1	0 – 1 mm / 0 – 2 mm	Seepage to partial losses
KL-3	1 – 3 mm	Partial losses
KL-5	3 – 5 mm	Severe losses
KL-10	5 – 10 mm	Severe to total losses (on request)

Physical and chemical properties

Parameter	Value	Note
Moisture	8 ± 1 %	—
Ash content	max 2.7 %	—
Magnetic impurities	not allowed	—
Chlorine-organic compounds	absent	—
Thermal stability	above 180 °C	operating range in mud systems
Bulk density	on request	depends on grade
Shelf life	unlimited	under proper storage conditions

Sieve analysis, grade KL-1 (example)

Screen	Residue
2.0 mm	max 5 %
1.0 mm	min 30 %
0.56 mm	max 50 %

Field performance

Confirmed by Drilling Company Samara at the wells of Samaraneftegaz: fractions from 200 to 1250 microns were applied in rotary drilling and with downhole motors, sealing losses with an intensity of up to 3 m³/h. Reported as inert to the mud system, with only a minor reduction in filtration and no caking.

Packing and documents

Packing: on request.

Certificate of conformity: ROSS RU.32638.04RTP0.OSP01.S01139, valid until 25.11.2027.

Each shipment is supplied with a quality passport, test report, safety data sheet and certificate of origin.

Test report by RIPI (Research Institute of Petroleum Industry, Iran) available on request.

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Values are typical for serial production. Parameters for a specific batch are confirmed by the quality passport issued for that batch.