

Lost Circulation Specialists, Inc.

MAGMA FIBER® *The Acid Soluble LCM*

MAGMA FIBER

Acid soluble drilling mud and completion/workover fluid additive

MAGMA FIBER is a specially formulated extrusion spun mineral fiber. This coarse and long, flexible fiber will give increased circulation by bridging and plugging off voids, fractures, and all types of permeable formations.

Our product creates an interlocking mineral fiber matrix that provides a strong framework for an extremely durable mud cake. It's effective in hard-to-plug permeable, unconsolidated formations because it naturally migrates to areas of high permeability and avoids areas of low permeability.

MAGMA FIBER is an inert, non-damaging LCM/Sweep material that is environmentally safe with a LC-50 of one million. It is compatible with fresh water, salt water, oil based muds and emulsions, and in completion/workover fluids.

Additionally, the material is thermally stable at temperatures up to 1,800 °F and with a specific gravity of 2.6, there are no buoyant forces caused by the product.

MAGMA FIBER is removed by simple acidization which leaves a greater volume of open flow channels for production – improving well efficiency.

It's easy to use. Simply pour it into your mud system and the **MAGMA FIBER** nodules mix without high agitation.

In general lost circulation conditions, **MAGMA FIBER**'s strong, flexible fibers form a dense packing distribution to effectively plug fractures. Non-toxic, non-fermenting, and resistant to migration, **MAGMA FIBER** is also effective in drilling through aquifers.

While drilling through the production zone, **MAGMA FIBER** provides a wide range of particle sizes that protect against the initial mud spurt of hydraulic mud fracturing.

In workovers, adding a barrier of **MAGMA FIBER** to the production zone well bore greatly reduces the volume of expensive completion fluid lost into reservoirs.

MAGMA FIBER is a patent and trademark protected product that has been field proven all over the world. It is without doubt the best Lost Circulation Material that you can use.

MAGMA FIBER

The most effective LCM you can use

Applications

- ✧ Water-Based Mud
- ✧ Oil-Based Mud
- ✧ Completion fluids
- ✧ Workover Operations
- ✧ Cement Additive
- ✧ Sweep Material

Advantages

- ✧ Acid Soluble – 98.4% in HCL Acid 60/40 blend of HLC and Acetic Acid
- ✧ Compatible with all Drilling/Completion Fluids
- ✧ Environmentally Safe
- ✧ Temperature Stable
- ✧ Inert, Non-Damaging
- ✧ Non-Fermenting, non-corrosive

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COARSE and FINE grades
Acid Soluble Lost Circulation Material

MAGMA FIBER Coarse and Fine grades are man-made extrusion spun mineral Fibers.

MAGMA FIBER Coarse is designed to bridge and plug off voids and fractures in all types of formations. **MAGMA FIBER** Fine is designed to seal permeable and under pressured sand formations and micro fractures.

The interlocking nature of the individual **MAGMA FIBER** fibers provide a strong framework for an extremely durable mud cake.

MAGMA FIBER is a field proven LCM/sweep material. **MAGMA FIBER** “Fine” and “Coarse” both can be added directly through the hopper.

MAGMA FIBER Fine is a new nodulized material which is more easily poured and can be mixed as quickly as any other LCM. The fibers themselves are made from the same base material as the “Coarse” **MAGMA FIBER** is made from. The difference between the two products is that the “Fine” product has been machined or “worked” one step further.

Applications

- ✧ Water-Based Muds
- ✧ Oil-Based Muds
- ✧ Completion fluids
- ✧ Workover Operations
- ✧ Cement Additive
- ✧ Sweep Material

Advantages

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60/40 blend of HLC and Acetic Acid
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Data Sheet

DESCRIPTION:

MAGMA FIBER is a specially formulated, extrusion spun mineral fiber. This coarse, long flexible FIBER will give increased circulation by bridging and plugging off voids, fractures, and all types of permeable formations. **MAGMA FIBER** is compatible with all oil and water based muds and emulsions. The interlocking nature of these strong fibers produces a framework for forming a low permeability mud cake with a resultant reduction in drilling fluid loss and hole caking. Being flexible, low in alkalinity and inorganic, **MAGMA FIBER** is inert to drilling fluids. The fiber is also non-corrosive to expensive equipment while maintaining high-solubility in diluted hydrochloric acid. Being acid soluble, it is particularly adaptable to rework operations.

MAGMA FIBER is coated with a monomolecular film of a specially formulated surfactant that speeds separation of the fibers, after which it is then formed into nodules. These nodules are formed into loosely connected groups so that when they are immersed in drilling fluids and subjected to agitation the nodules separate into individual fibers.

ACID SOLUBLE, EASILY WETTED, NON-COMBUSTIBLE, NON-FERMENTING, INORGANIC, NON-POLLUTING, NON-CORROSIVE, NON-TOXIC, TEMPERATURE STABLE, CONTAINS NO ASBESTOS.

TYPICAL CHEMICAL ANALYSIS

COMPOSITION	% WEIGHT
SiO ₂	36-45
Al ₂ O ₃	4-9
CaO	31-40
MgO	8-15
Fe ₂ O ₃	0-2
Total Alkalines as Na ₂ O	1-2
SO ₃	0.5 or less

PROPERTIES	
pH in water	7.0-8.0
Loss on ignition	Less than 0.5
% water soluble	Less than 0.2
Water soluble sulfate	Less than 0.05
Melting point	2400°F

APPLICATIONS

MAGMA FIBER can be used in concentrations of up to 30+ lb/bbl in slug treatments or as additive to an entire system. **MAGMA FIBER** has been used in concentrations of ½ of a bag added every 30 minutes at the suction pit for ongoing seepage. For seepage or partial/total losses, concentrations of 5-15 lb/bbl are used to end losses. **MAGMA FIBER** is particularly suitable for oil base mud, when more than 6-10 bags are mixed at once, a man should be at the shaker screen when the slug comes around (to clean or bypass the shaker screen). **MAGMA FIBER** can be used in all oil and water base mud systems. **MAGMA FIBER** should be added directly into pits and gunned into the mud, it can be mixed through the mud hopper but it is slower.

LIMITATION

When acid solubility is not important, a combination of materials can be added to ensure a good particle size distribution.

PACKAGING

MAGMA FIBER COARSE is available in 30 lb poly bags

MAGMA FIBER FINE is available in 25 lb paper bags