

# N-SEAL™

## LOST CIRCULATION MATERIAL

### Product Description

N-SEAL™ lost circulation material (LCM) is a specially formulated acid soluble extrusion spun mineral fiber, and is compatible with all oil and water-based mud systems. 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. Due to its solubility in weak acids, N-SEAL LCM is easily removed in production reservoirs.

### Applications/Functions

- » N-SEAL LCM can be used in concentrations of up to 30 lb/bbl (85.6 kg/m<sup>3</sup>) in slug treatments or as additive to the entire fluid system.
- » Seepage control
- » Bridging
- » Plugging voids
- » Fractures
- » Work over operations
- » Oil muds
- » Water muds
- » Completion fluids
- » Cement additives

### Advantages

- » Acid soluble
- » Easily-wetted
- » Non-combustible
- » Non-fermenting
- » Inorganic
- » Non-polluting
- » Non-corrosive
- » Non-toxic
- » Temperature stable
- » Contains no asbestos

### Typical Properties

- » Appearance: Gray white fiber
- » Specific gravity: 2.6

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### Recommended Treatment

1. N-SEAL LCM can be added directly through the hopper.
2. For normal treatment, add 5-8 lb/bbl (14.3-22.8 kg/m<sup>3</sup>) of N-SEAL LCM.
3. As a pill, add 15-30 lb/bbl (42.8-85.6 kg/m<sup>3</sup>) of N-SEAL LCM.
4. N-SEAL LCM is 98% acid soluble in 7.5% HCl or a blend of HCl and acetic acid.

### Packaging

N-SEAL LCM is packaged in 30-lb (13.6-kg) sacks.

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