

Product Summary

Turbo-Chem's SwellLCM is a patented, unique swelling agent that has been used successfully world-wide for massive loss treatment. SwellLCM thrives when pumped ahead of high fluid loss squeezes and/or cement jobs in extreme loss circulation events. SwellLCM's one-of-a kind blend of super absorbent and Biopolymer combine to form a low shear rate viscous fluid that will expand to fill large-continuous wellbore fractures.

Physical Properties:

Appearance: White granular powder

Specific Gravity (g/mL): (1.52)

Odor: Slight

pH in 1% solution: 6.5-7.5

Recommended Treatment

Turbo-Chem recommends pumping SwellLCM @ 10 - 12.5 ppb. (at any weight) ahead of high fluid loss / high solid squeeze applications and/or cement jobs. The SwellLCM should be mixed at 1/2 the volume of the squeeze and/or cement pill to be pumped behind it.

Handling and Storage

Proper PPE should be worn while handling this product. Minimize dust exposure. Please review SDS before using.

SwellLCM fully activated, sealing marble rock ahead of EZ Squeeze

Wellbore Stability Benefits:

- Can be utilized as a Pre-Cement application to avoid multiple failed cement operations.
- Vital in stopping losses in cavernous formations which normally would require cementing or plug and abandonment.
- Eliminates the risk of sidetracking (which can occur with cementing).
- Effective at both low and high wellbore temperatures.
- Easily mixed through the hopper.
- Can be used in drilling or work over cased hole for sealing leaks and perforations.
- Less costly alternative to pumping multiple LCM pills and/or cement.
- Very low concentrations required.

Packaging

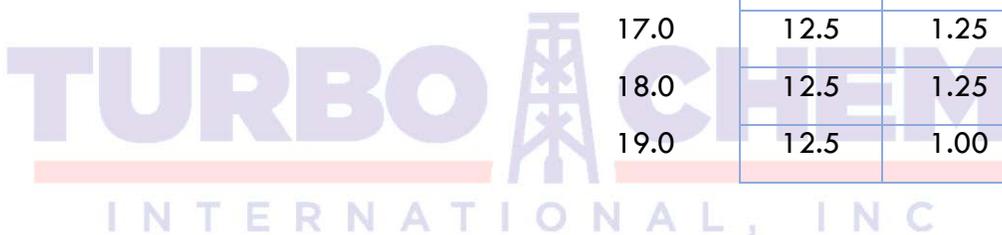
SwellLCM is available in 10 lb. pails, 32 pails/pallet.



Mixing Requirements

- Empty isolated mixing tank is ideal.
- SwellCM should only be mixed prior to pumping. Not recommended to be mixed days ahead.
- Mix water must be adjusted and maintained at 2-3 pH while mixing.
- SwellCM should be agitated for 30 minutes to an hour for proper polymerization to occur.
- Barite should be added after all the SwellCM pails are mixed (while maintaining a pH of 4 or below).

Density (freshwater)	Lbs./bbl.	Pails/bbl.	Barite Sacks	Water/bbl.
8.0	12.5	1.25	0	.98
9.0	12.5	1.25	0.37	.98
10.0	12.5	1.25	0.92	.94
11.0	12.5	1.25	1.47	.90
12.0	12.5	1.25	2.00	.86
13.0	12.5	1.25	2.57	.82
14.0	12.5	1.25	3.12	.79
15.0	12.5	1.25	3.67	.75
16.0	12.5	1.25	4.22	.73
17.0	12.5	1.25	4.77	.67
18.0	12.5	1.25	5.32	.64
19.0	12.5	1.00	5.87	.60



Mixing & Pumping procedure for SwellCM™

1. Clean mixing pit and lines thoroughly leaving no residual mud in the pit or the lines.
2. Add 49 bbls of freshwater to the mixing pit.
3. Adjust the pH of the freshwater to 3-4 pH using SwellCM Activator.
4. Add 63 pails of SwellCM to the 3-4 pH mix-water and allow agitation until homogenous
5. Add barite, if needed, to reach desired slurry weight while maintaining 3-4 pH
6. Mix entire slurry until homogenous, then pump the SwellCM slurry into the drill pipe, followed by 3 bbls of system mud, then begin the mixing procedure for EZ Squeeze and/or Cement.