



Lost circulation cementing solutions

Innovative technologies to minimize well control problems
caused by seepage to total lost circulation



Challenge	Products
Customized LCM solutions to achieve top of cement	Lost Circulation Wizard™ software Particle Wizard™ software
Drilling severe losses	SentinelCem™ Pro cement system Flo-Chek® treatment service Thermatek™ fluid invasion control treatment BridgeBlend™ LCM
Cementing minor/seepage losses	Tuned® Defense™ cement spacer WellLife® fibers BridgeBlend™ LCM BridgeMaker™ II LCM
Cementing moderate losses	BridgeMaker™ II LCM BridgeBlend™ LCM Tuned® Light™ cement solutions
Cementing severe losses	ZoneSeal® service for foam cementing BridgeBlend™ LCM Tuned® Defense™ cement spacer with BridgeMaker™ II LCM

Contact your Halliburton representative to identify the optimal tailored solution for your specific lost circulation challenge.

Understand the loss challenge

Our approach begins with understanding the specific loss scenario with consideration to factors, such as loss rate and loss zone depth, before treatment recommendation. It is also important to understand formation characteristics and fracture size to tailor an optimal lost circulation solution. Through focus on the unique characteristics of each challenge, we ensure our solutions are both innovative and effective.

Tailored solutions

SentinelCem™ Pro cement system is a lightweight, shear dependent, thixotropic solution for severe to total losses in highly fractured, vugular, and cavernous formations where typical treatments are ineffective. The system is easily mixed with a wide range of cement classes and has a low sensitivity to water source hardness. This low-abrasive product pumps safely through the bottomhole assembly (BHA) and builds an adjustable early compressive strength, which helps with openhole support and minimizes the likelihood of sidetracking. This product is available in 50-lb sacks for proactive rigsite deployment.

Flo-Chek® treatment is used with cement to plug lost circulation or downhole water flow zones. The product forms a stiff, semisolid gel once in contact with cement downhole, which helps control lost circulation.

It's important to understand formation characteristics and fracture size to tailor an optimal lost circulation solution.

Tuned® Defense™ cement spacer helps prevent seepage lost circulation during cement operations and minimizes cement fallback. It is ideal for applications with permeable or fractured formations, narrow pore-pressure/fracture-gradient margins, fields with a history of losses, or areas with strict top of cement (TOC) requirements. This product effectively treats severe losses when enhanced with BridgeMaker™ II LCM or Bridgeblend LCM.

WellLife® fibers are added to cement or spacer as a single LCM product or in combination with other Halliburton LCMs in a BridgeBlend LCM design to address lost circulation challenges with a tailored LCM bridging solution.

BridgeMaker™ II LCM helps overcome lost circulation and prepares the wellbore for cement operations. This environmentally acceptable blend includes coarse and tough materials, fibers, and medium-sized angular material. When combined with cement or spacer systems, like Tuned® Defense™ cement spacer, it helps mitigate moderate to severe losses.

BridgeBlend™ LCM is a custom-tailored lost circulation solution that uses existing Halliburton LCM products. The solution is tailored with precise design engineering tools, such as the Halliburton Lost Circulation Wizard™ software and Particle Wizard™ software, to help design an effective solution that is safe to pump through critical flow-path restrictions.

Tuned® Light™ cement solutions are lightweight cement systems that help minimize equivalent circulating density (ECD) while pumping cement, which helps prevent lost circulation that results from exceeding the formation fracture gradient. They use hollow microspheres to achieve low cement slurry densities with relatively high compressive strength compared to conventional water-extended cement slurries.

ZoneSeal® foam cementing service helps ensure a stable, foamed slurry that enhances mud displacement, helps cure lost circulation, and combats gas flow potential through cement. Gas molecules in the bubbles expand and contract with pressure and temperature changes once the cement sheath is set, which gives foam cement systems greater ductility than conventional lightweight systems.

iCem® cementing service allows engineers to make well-informed decisions to tailor the job design, get casing safely to bottom, place cement, and predict cement quality. To design and place effective barriers, iCem service evaluates safe casing placement, LCM strategies with the Particle Wizard™ LCM software, and safe/optimum cement placement with 2D hydraulics and 3D displacement efficiency simulations to achieve the required TOC.

Advanced software solutions manage the toughest lost circulation challenge

Prevent plugging downhole equipment with the most effective LCM/fluids package tailored for your unique wellbore condition.

Particle Wizard™ software evaluates LCM particle selection and concentration for optimal passage, suspendability, and transport. The software evaluates material type, size, and concentration in addition to critical equipment dimensions to determine the most effective fluid and material concentrations for these restricted areas.

Lost Circulation Wizard™ software predicts the optimal LCM/fluid package to mitigate losses during and after cement operations. The software uses a hydraulics engine model that simulates downhole conditions and fluid dynamics to predict slurry behavior under various temperature and pressure during cement operations.



Our approach integrates state-of-the-art digital twins, engineered fluids, and LCMs to create customized solutions.



To learn more, contact your
Halliburton cementing representative
for a risk management discussion
or visit Halliburton.com

**For more information, contact your local Halliburton representative or visit us
on the web at www.halliburton.com**

Sales of Halliburton products and services will be in accord solely with the terms
and conditions contained in the contract between Halliburton and the customer that
is applicable to the sale.

H014993 4/25 © 2025 Halliburton. All Rights Reserved.

halliburton.com

HALLIBURTON