



TECH DATA SHEET



TEAMWORK ISN'T OPTIONAL. IT'S ESSENTIAL.

SABER PLUG™

Engineered Multi-Range Loss Circulation Material
& Formation Sealing System

PRODUCT DESCRIPTION

SABER PLUG™ is a proprietary, engineered multi-component loss circulation material (LCM) designed to provide reliable sealing performance across a broad spectrum of loss zones, including permeable formations, depleted sands, micro-fractures, and naturally occurring fractures. The unique combination of fibrous and granular materials creates an effective bridging structure that rapidly reduces fluid invasion and restores circulation stability.

SABER PLUG™ utilizes a controlled particle-size distribution available in fine, medium, and coarse grades to provide optimized coverage across varying formation openings. The combination of particle sizes allows the material to initiate bridging at the formation face while smaller particles migrate into pore spaces to create a dense, low-permeability internal seal.

The fibrous components provide reinforcement within the developing seal, improving structural integrity and resistance to erosion during circulation. This engineered sealing mechanism helps minimize repeat losses, reduces drilling interruptions, and improves overall wellbore stability.

In addition to lost circulation control, SABER PLUG™ contributes to improved drilling performance by enhancing filter cake quality and reducing frictional interaction between the drill string and wellbore, helping to minimize torque and drag.

SABER PLUG™ is compatible with both water-based and oil-based drilling fluid systems and can be easily incorporated using conventional rig-site mixing equipment.

TYPICAL PROPERTIES

PROPERTY	TYPICAL VALUE
Appearance	Light to Dark Brown Fibers and Granules
Moisture Content	<12%

PARTICLE SIZE DISTRIBUTION

PARTICLE SIZE RANGE	FINE	MEDIUM	COARSE
D10 (microns)	56	130	217
D50 (microns)	128	519	1,276
D90 (microns)	239	2,175	4,045

KEY BENEFITS

- Provides effective sealing of permeable formations and loss zones
- Available in multiple particle-size ranges for customized loss control
- Combines granular bridging with fibrous reinforcement for stronger seals
- Reduces fluid invasion and helps restore circulation
- Improves seal durability under dynamic drilling conditions
- Helps reduce torque and drag through improved filter cake characteristics
- Compatible with water-based and oil-based drilling fluids
- Easily mixed using standard field equipment

HANDLING AND STORAGE

Store in a cool, dry place in unopened packaging. Protect from moisture. Keep bags sealed when not in use. Handle in accordance with good industrial hygiene and safety practices.

HEALTH AND SAFETY INFORMATION

SABER PLUG™ is not classified as hazardous under OSHA HazCom 2012. Avoid prolonged inhalation of dust. Use appropriate personal protective equipment (PPE) including dust mask, gloves, and safety glasses when handling.

Eye Contact: Flush with water for at least 15 minutes. Seek medical attention if irritation persists.

Skin Contact: Wash with soap and water. Remove contaminated clothing.

Inhalation: Move to fresh air. If symptoms persist, seek medical attention.

Ingestion: Not expected to be harmful if swallowed. Rinse mouth and drink water. Seek medical attention if discomfort occurs.

SHELF LIFE

36 months (3 years) when stored in unopened packaging under recommended storage conditions.

PACKAGING

SABER PLUG™ is supplied in 25 lb bags for convenient handling, transportation, and field application.