WelSPACER™

Lightweight Cement Spacer and Sweep Additive for Lost Circulation Control

Description

WelSPACER™ is an engineered spacer and sweep additive designed to enhance spacer performance, improve drilling fluid removal, and provide fluid loss control during primary and remedial cementing operations. Delivering dual-performance functionality as both a spacer additive and a dry-blended LCM, WelSPACER™ provides versatile loss mitigation across drilling and cement placement stages.

Formulated with a multi-modal particle size distribution and sized crumb rubber technology, the product improves displacement efficiency, strengthens zonal isolation, and supports optimized top-of-cement placement. Its mechanical properties enhance flexibility, tensile strength, and crack resistance within the cement matrix, contributing to long-term well integrity in conventional, HPHT, geothermal, and P&A environments.

Advantage

- WelSPACER™ enhances displacement efficiency by reducing interfacial tension and promoting favorable rheological profiles between spacer and drilling fluids.
- The engineered spacer particles provide mechanical bridging in permeable zones, helping to mitigate fluid losses prior to cement placement.
- It supports improved drilling fluid removal ahead of the cement slurry, reducing contamination and improving bonding at the casing and formation interface.
- The lightweight nature of the additive reduces spacer density without compromising performance, aiding in hydrostatic management.
- WelSPACER™ can also be deployed as a sweep pill ahead of cement placement to remove drilling fluid residues, condition the wellbore, and improve spacer and cement placement efficiency.
- WelSPACER™ is compatible with a wide range cement formulations.

Application

- WelSPACER™ is used in primary cementing operations to improve spacer performance and reduce fluid losses ahead of cement placement.
- It is well suited for remedial cementing jobs where displacement efficiency and loss mitigation are critical.
- The additive can be incorporated into spacer systems ahead of conventional and lightweight cement slurries.
- It is effective in wells with permeable formations, natural fractures, vugs, or depleted zones where lost circulation and poor mud removal may compromise cement placement.
- The product can be deployed as a sweep to improve wellbore conditioning and enhance drilling fluid removal prior to spacer and cement placement.

Environmental Advantage

- WelSPACER meets LC50 aquatic toxicity testing criteria, supporting environmentally responsible drilling operations.
- Improved fluid displacement and reduced cement losses help minimize overall material waste and enhance operational efficiency.
- The reduction in lost circulation events while using WelSPACER enable lower total cement consumption and associated rig time.
- Enhanced placement efficiency supports shorter cementing operations and can contribute to reduced fuel consumption and emissions.
- Consistent performance across a range of well conditions promotes operational reliability and reduces intervention frequency.

Treatment Recommendations

- WelSPACER™ concentration should be tailored based on well conditions, fluid properties, and loss severity.
- Laboratory evaluation is recommended to optimize spacer design, confirm rheological compatibility, and assess loss mitigation performance.
- The product should be added through the dry blend or bulk blending system, ensuring consistent dispersion within the spacer fluid.
- Adequate mixing energy is recommended to achieve uniform distribution of particles without agglomeration.
- Monitor drilling fluid removal and spacer returns during placement to evaluate effectiveness and adjust treatment concentration as required.

Physical Properties

Appearance: Black granules with multi-colored rigid flakes

Temperature: Stable from 500°F (260°C) up to 1,112°F (600°C) under downhole conditions

Bulk Density: 0.799 g/ml

Specific Gravity: 1.15–1.30

Absolute Density: 73.9–80.8 lb/ft^3

Compatibility: Suitable for use with most water-based, oil-based, and synthetic drilling fluids when formulated into spacer systems

Handling and Storage

WelSPACER™ should be stored in a clean, dry environment protected from moisture and contamination. Packaging should remain sealed until use, and standard bulk material handling practices should be followed during blending and mixing operations. Personnel should consult the Safety Data Sheet for appropriate safety procedures and personal protective equipment recommendations.

Packaging

- WelSPACER™ is packaged in 50 lb bags, with 40 bags per pallet.
- The product is also available in 2- 1,000 lb supersacks per pallet for high-volume cementing operations.
- Bulk packaging options may be available for larger programs.

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