



Tiger Bullets Micro additive uses nano technology and fiber plugging agents for both lost circulation and loss prevention applications.

Tiger Bullets Micro are produced from renewable natural resources and feature a broad particle size range. They are specifically engineered to rapidly seal permeable formations and micro fractures.

Applications

Tiger Bullets Micro is a superior bridging agent, field-proven to be highly effective when drilling high-permeability/ high-porosity zones with high differential pressures. Tiger Bullets Micro is based on nano technology and designed to control lost circulation, bridge, and seal permeable formations to reduce the risks of stuck pipe and provide filtration control.

The recommended treatment to reduce differential sticking tendencies is 11 to 23 kg/m³ (4 to 8 lb./bbl.). After the initial treatment, periodic treatments should be used to maintain the desired concentration.

For seepage losses, normal treatments are from 29 to 57 kg/m³ (10 to 20 lb./bbl.). Concentrations in the 57 to 100 kg/m³ (20 to 35 lb./bbl.) range are recommended for more severe lost circulation. Since the material absorbs a small quantity of liquid when added to the mud system, pilot testing is recommended before adding high concentrations.

Tiger Bullets Micro should be added to the mud system through a mixing hopper and into the suction pit, or any other pit with good agitation. It is most effective when maintained at the desired concentration throughout the circulating system. However, treatment methods, including periodic additions, sweeps, batch- or slug-treatments and pills have all been used successfully.

Tiger Bullets Micro is compatible with all mud systems and can be used in combination with other lost-circulation materials.

Advantages

- Based on nano technology to effectively bridge and seal fractures in a wide range of formations.
- Inert material with minimum effect on mud properties.
- Compatible with all mud systems and other lost-circulation materials.
- Easily mixed and dispersed into the mud system.
- Used with MWD and mud motor in concentrations up to 35 ppb.
- Used for loss prevention and lost circulation. Also, helps in reducing torque, drag, prevents differential sticking and decreases filter cake thickness thus lowering the filtrate loss.

Limitations

- The coarser material can be removed from the circulating system by shale shakers and solids-control equipment.
- Biodegradable and can be subject to bacterial degradation. If fermentation is indicated, a biocide should be used at the recommended maximum treatment level.
- Absorbs a small quantity of liquid when added to a mud system and can elevate flow properties when used at very high concentrations.
- Treatments with additional wetting agent may be required in non-aqueous fluids due to the high surface area of this material.

Toxicity and Handling

Handle as an industrial chemical, wearing protective equipment and observing the precautions described in the Material Safety Data Sheet (SDS).

Dust can form an explosive mixture in the air. Keep away from open flames or other sources of ignition.

Packaging and Storage

Tiger Bullets Micro is packaged in 11.4 kg (25 lb.), multi-wall, paper sacks).

Store in a dry, well-ventilated area. Keep container closed. Store away from incompatibles.

Follow safe warehousing practice: palletizing, banding, shrink-wrapping, and/or stacking.