



INTRODUCING ENCAPSO™

DESCRIPTION:

Encapso™ is algae oil encapsulated in a saccharide shell, 5-10 microns in size, that enhances rheology, lowers fluid loss and lubricates the bore and drill string. Due to the encapsulation, the Encapso™ product is viable in high temperature, high pH, high calcium, divalent brines, aqueous and non-aqueous systems. Extensive lab testing, tunneling and down hole implementation has shown this fluid enhancer to be a viable ingredient in intermediate as well as production zones.

APPLICATION:

Encapso™ is designed to be a part of the initial fluid formulation, concentrations are recommended at 12-18ppb, (34-53Kg/m³); this equates to 1-3% Algae Oil v:v.

Encapso™ will enhance the rheology by 2-4 Yield Points, lower the fluid loss by up to 50% as well as lubricate the casing, formation and bottom hole assembly. Care should be taken in reducing the fluid loss control additives and viscosifiers used in normal conditions to achieve desired properties.

The key to the Encapso™ product is consistent dispersion throughout the fluid system. This can be obtained in several ways.

- Consistent additions at the Hopper
- Pre-mix pit for additions while drilling

ADVANTAGES:

- Reduces friction and torque, improves fluid loss and enhances rheology
- No greasing or foaming in high salt, high pH conditions
- Cell wall has been observed to be stable up to 390°F, while the lubricant has been observed to be stable up to 650°F
- Product performance is not affected by frozen storage
- Not toxic and meets requirements for “Readily Biodegradable” designation based on testing method OECD 301B



Physical Properties	
Appearance	Tan Granular Solid
Total Oil by Weight	50-70%
Moisture	<4%
Bulk Density	2-3lb/gal (240-360kg/m ³)
Specific Gravity	1.0 – 1.1
Flash Point	N/A
Freezing / Melting Point	N/A



LIMITATIONS

Encapso™ may significantly increase viscosity in barite weighted muds where there is low free available water. Suggested mud weight limits when Encapso™ is loaded at 18 ppb are outlined below.

Encapso™ is not recommended for use in calcium chloride or formate fluid systems if barite is being used to further increase weight.

HANDLING

Observe good industrial hygiene practices. Review the Safety Data Sheet (SDS) for this product prior to use.

PACKAGING

660 lb. (300kg) super sacks or 40 lb. bags. Customized packaging available upon request.

RECOMMENDED STORAGE

Keep super sack completely sealed, and do not let moisture accumulate on the top of the sack. Minimum shelf life is 2 years for product stored in original packaging under cool, dry conditions (< 25 °C, < 70% RH).

REGULATORY STATUS

Listed on US TSCA inventory per 40CFR Section 725.8(b); allowed in Canada; In accordance with Annex V of REACH (exemptions from obligations to register), Encapso™ is exempt from the obligation to register for REACH in the EU.

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