

SECTION 1. IDENTIFICATION OF THE SUBSTANCE AND DETAILS OF THE COMPANY

Product Name: PURE-BORETM
Product Description: Biodegradable Drilling Fluid

Safety Data Sheet No: 5001EC
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Manufacturer's Name and Address:

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SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

PRODUCT IDENTIFICATION:

Chemical Name: Natural Polysaccharides

HMIS Rating: Health - 0, Flammability - 1, Reactivity - 0, Protective Equipment - See Section 8

EXPOSURE LIMITS

<u>CHEMICAL IDENTITY</u>	<u>OSHA PEL</u> (TWA)	<u>ACGIH TLV</u> (TWA)	<u>DFG MAKs</u> (TWA)
	NE	NE	NE
Particulates Not Otherwise Specified (PNOS)	15 mg/m ³	10 mg/m ³	4 mg/m ³
Inhalable	5 mg/m ³	3 mg/m ³	1.5 mg/m ³
Respirable			

OSHA PEL - OSHA Permissible Exposure Limit, 8 hour Time-Weighted Average

NE = Not Established

ACGIH TLV - American Conference of Governmental Industrial Hygienists Threshold Limit Value, 8 hr. TWA, 40 hr. week

DFG MAK - Federal Republic of Germany Maximum Concentration Values in the Workplace.

SECTION 3. HAZARDS IDENTIFICATION

Description: White powder with a slight odour.

Statement of Hazards: This product contains no hazardous ingredients. It is not classified as a carcinogen according to IARC, OSHA, or NTP.

Precautionary Measures:

Eye Contact - Dry powder may cause foreign body irritation in some individuals. Solutions are non-irritating.

Skin Contact - Prolonged contact with dry powder may cause drying or chapping of the skin. No evidence of other adverse effects known.

Inhalation - No evidence of adverse effects from available information. However, excessive inhalation of dust may be annoying and can mechanically impede respiration.

Ingestion - No evidence of adverse effects from available information. LD₅₀ is greater than 5000 mg/kg.

Medical Conditions Aggravated by Exposure: Existing respiratory conditions.

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SECTION 4. FIRST AID MEASURES

Eye Contact: Flush with water. If irritation occurs, consult a physician.

Ingestion: If illness or adverse effects occur, seek medical attention.

Skin: Remove contaminated clothing and laundry before re-use. Wash affected area with soap and water.

Inhalation: Move to fresh air.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point (*Method Used*): Not Applicable (Warning: combustible dust)

Autoignition Temperature: Not Evaluated

Sensitivity to Mechanical Impact: None

Fire Fighting Extinguishing Media: Carbon dioxide, dry chemical or foam.

Fire Fighting Equipment: No special procedures. However, wetted product presents a slip hazard.

Fire and Explosion Hazards: Dust in sufficient concentration can result in an explosive mixture in air. Handle to minimize dusting, and eliminate open flame and other sources of ignition.

Hazardous Decomposition Products: None. (Oxides of carbon and nitrogen formed when burned).

Emergency Response Guidebook Information: No ERG # indicated. Handle as a combustible material.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Product becomes slippery and difficult to handle when wet; spills are best handled while still dry. Sweep up and collect dry product. Absorb wet product with vermiculite or other inert material. Then water wash area to waste treatment to eliminate slip hazard.

SECTION 7. HANDLING AND STORAGE

Precautions: Avoid contact with eyes, skin or clothing. Avoid breathing vapors, mist, fume or dust. Wash thoroughly after handling. If clothing becomes contaminated, remove and launder or dry-clean before reuse.

Storage Information: Store in a cool, dry place.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Skin Protection: Avoid unnecessary skin contact.

Respiratory Protection: Use approved dust mask/respirator P2 or NIOSH approved dust respirator as required to control exposure to respirable particulate.

Personal Protective Equipment: Use appropriate respiratory protection for respirable particulate based on consideration of airborne workplace concentration and duration of exposure arising from intended end use.

Engineering Controls: Use local exhaust as required to maintain exposures below applicable occupational exposure limits.

Additional Information: Provide eyewash station(s). Select additional protective equipment (e.g. apron, face shield, etc.) depending on conditions of use.

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odour: White to off-white free flowing powder

Odour Threshold: Not Applicable

Freezing Point: Not Applicable

Vapor Pressure (mm Hg): Not Applicable

Vapor Density (Air = 1): Not Applicable

Decomposition Temperature: Not Evaluated

Molecular Weight: 1,000,000 (approx.)

Boiling Point: Not applicable

Melting Point: Not Applicable

Solubility in Water: Complete

Bulk Density: 0.3 - 0.80 g/cm³ (approx.)

Evaporation Rate: Not Applicable

VOC: Not Evaluated

pH: 6.0 – 8.5 (0.5% solution)

SECTION 10. STABILITY AND REACTIVITY

Conditions to Avoid: Avoid wet and humid conditions.

Stability: Stable

Hazardous Polymerization: Will not occur

Hazardous Decomposition Products: None (biodegradable)

Incompatibility: Strong oxidants such as liquid chlorine, enriched gaseous or liquid oxygen, and sodium or calcium hypochlorite.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity: Low oral toxicity. Acute Oral LD50 (rat) > 10,000 - 27000mg/kg. No adverse effects have been noted in chronic feeding studies using laboratory animals and humans

Carcinogenicity: Not listed as a carcinogen by IARC, NTP, OSHA, or ACGIH.

Reproductive Toxicity: No data for product. No effects anticipated.

Teratogenicity: No data for product. No effects anticipated.

Skin Irritation: Dry powder may cause foreign body irritation in some individuals.

Toxicologically Synergistic Products: None known.

SECTION 12. ECOLOGICAL INFORMATION

Ecological Information: Product not considered toxic to aquatic organisms.

Fish Toxicity: No data available

SECTION 13. DISPOSAL CONSIDERATIONS

RCRA Hazard Class: This product, when unadulterated, is not classified as hazardous for disposal purposes by RCRA Standards.

Waste Disposal Method: Disposal must be arranged in accordance with local and national regulations.

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SECTION 14. TRANSPORT INFORMATION

DOT – Proper Shipping Name: Not a DOT/IMO Hazardous Material.

Road Transport ADR/RID: Not a dangerous substance as defined in the above regulations.

Inland Navigation AND/ADNR: Not a dangerous substance as defined in the above regulations.

Maritime Transport IMDG: Not a dangerous substance as defined in the above regulations.

Air Transport ICAO/IATA: Not a dangerous substance as defined in the above regulations.

SECTION 15. REGULATORY INFORMATION

SARA 313: This product contains the following chemicals subject to annual release reporting requirements under the SARA section 313 (40 CFR 372): None

CERCLA Section 103 Reportable Quantity: None

TSCA Section 5(e) – Consent Order / SNUR: This product is not subject to a Section 5(e) Consent Order or Significant New Use Rule (SNUR).

TSCA Section 8(b) – Inventory Status: All chemical(s) comprising this product are either exempt or listed on the TSCA Inventory.

Chemical Weapons Convention (CWC): This product does not contain any chemicals listed under the Chemical Weapons Convention Schedules of Chemicals.

California Proposition 65: This product contains no chemicals which are currently listed on the California list of Known Carcinogens and Reproductive Toxins:

European Inventory of Commercial Chemical Substances: All the components of this product are listed on the EINECS Inventory or exempt from notification requirements.

Canadian Environmental Protection Act: All the components of this product are listed on the Canadian Domestic Substances List or exempt from notification requirements.

Japan MITI: All the components of this product are existing chemical substances as defined in the Chemical Substance Control Law

Australian Inventory of Chemical Substances: All the components of this product are listed on the AICS Inventory or exempt from notification requirements.

Canadian WHMIS Classification: Not hazardous

SECTION 15 continued. REGULATORY INFORMATION

European Community Labeling Classification: No label required

European Community Risk and Safety Phrases: None

SECTION 16. OTHER INFORMATION

Recommended Use: Biodegradable Drilling Fluid

References: 2001 ACGIH Guide to Occupational Exposure
Registry for Toxic Effects of Chemical Substances (RTECS), 1995.
Patty's Industrial Hygiene and Toxicology.

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