



FRANCIS DRILLING FLUIDS, LTD.

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

Trade Name(s): Flowzan Biopolymer	
Generic Name(s):	
Chemical Name(s): Proprietary (Chemical family Biopolymer)	
Francis Drilling Fluids, LTD. P.O. Box 1694 Crowley, LA 70527-1694	Emergency/Telephone No.: 800-960-6610 337-783-8685 Hazardous Materials No.: 800-255-3924 Poison Control Center No.: 800-256-9822

II. HAZARDOUS INGREDIENTS

Ingredient	CAS No.	%	Hazard
This product does not meet the definition of a hazardous chemical given in 29 CFR Part 1910-1200 (OSHA). Information on this form is furnished as a customer service.			

III. NFPA/HMIS HAZARD IDENTIFICATION SYSTEM

0=LEAST	1=SLIGHT	2=MODERATE	3=HIGH	4 =EXTREME
Health: 0				
Fire: 0				
Reactivity: 0				

IV. PHYSICAL DATA

Boiling Point (°F): NA	Specific Gravity (H ₂ O=1): ND
Vapor Pressure (mm. Hg): NA	Melting Point: ND
Vapor Density (Air = 1): NA	Evaporation Rate: NA
Solubility in Water: Complete	pH: ND
Density (at 20° C): ND	Odor: Slight
Appearance: White powder	Freezing Point: NA

V. FIRE AND EXPLOSION DATA

Flash Point: ND	Flammable Limits: LEL: ND UEL: ND
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Special Fire Fighting Procedures: Evacuate area of all unnecessary personnel. Use NIOSH/MSHA approved self-contained breathing apparatus (SCBA) and other protective equipment, if conditions warrant. Water fog or spray may be used to cool

exposed containers and equipment.

Unusual Fire and Explosion Hazards: Carbon oxides and various hydrocarbons formed when burned. If in a finely divided and suspended state, treat as a flammable dust.

Extinguishing Media: Dry chemical, foam or carbon dioxide, water spray or fog.

VI. REACTIVITY

Stability: Stable

Hazardous Polymerization: Will Not Occur

Incompatibility: ND

Hazardous Decomposition: ND

VII. HEALTH HAZARD INFORMATION

Routes of Exposure and Effects:

Skin: May produce slight irritation with prolonged contact with moistened product.

Eyes: Dust may produce mechanical irritation.

Inhalation: Non-irritating to mucous membranes, however, breathing high concentrations of the dust may cause mechanical irritation of the nose, throat, and upper respiratory tract.

Ingestion: Passes through relatively inert. May cause some gastrointestinal upset.

Permissible Exposure Limits: (for air contaminants)

OSHA PEL (8hr. TWA): Respirable - 5 mg/m³; Total dust - 15 mg/m³

ACGIH TLV: Respirable - ND; Total dust - 10 mg/m³

Carcinogenicity:

Listed By NTP: ND

Listed By: IARC: ND

Listed By OSHA: ND

Acute Oral LD50:

Acute Dermal LD50:

Aquatic Toxicology LC50:

Emergency and First Aid Procedures:

Skin: Wash skin with soap and water. If irritation or adverse symptoms develop, seek medical attention.

Eyes: Flush eyes with running water. If irritation or adverse symptoms develop, seek medical attention.

Ingestion: If illness or adverse symptoms develop, seek medical attention.

Inhalation: Remove from exposure. If illness or adverse symptoms develop, seek medical attention.

Additional Health Hazard Information: Subchronic and Chronic Effects of Overexposure - No adverse effects have been noted in chronic feeding studies using laboratory animals and humans. Sarcomas were exhibited at injection sites of animals receiving repeated massive subcutaneous injections of aqueous solutions of the material. The effects may have been the result of trauma.

Long term exposure to high dust concentrations may cause non-debilitating lung changes.

VIII. HANDLING AND USE PRECAUTIONS

Steps to be Taken if Material is Released or Spilled: Evacuate area if all unnecessary personnel. Wear protective equipment and or garments if exposure conditions warrant. Contain spill and control dusts. Keep out of water sources and

sewers. Vacuum up or spray with water and sweep up and place in impervious bags or containers. If concentrations of finely divided powdered materials in air are high, eliminate all possible ignition sources.

Waste Disposal Methods: (Insure Conformity with all Applicable Disposal Regulations): Manage in a permitted waste management facility. Prior to disposal, consult your environmental contact to determine if TCLP (Toxicity characteristic Leaching Procedure, EPA Test Method 1311) is required. Reference 40 CFR Part 261.

Handling and Storage Precautions: Avoid contact with eyes, skin or clothing. Avoid breathing vapors, mist, fume or dust. Wear equipment and/or garments if exposure conditions warrant. Launder contaminated clothing before reuse. Wash thoroughly after handling. Use with adequate ventilation.

Store in a well-ventilated area. Store in closed containers.

IX. INDUSTRIAL HYGIENE CONTROL MEASURES

Ventilation Requirements: Use adequate ventilation to control concentration below recommended exposure limits.

Respirator: Not generally required unless needed to prevent respiratory irritation. For concentrations exceeding the recommended exposure limit, use NIOSH/MSHA approved air purifying respirator.

Eye Protection: Use safety glasses with side shields

Gloves: Cotton gloves.

Other Protective Clothing or Equipment: Avoid unnecessary skin contamination with material. Personal protection information shown above is based on general information as to normal uses and conditions. Where special or unusual uses or conditions exist, it is suggested that the expert assistance of an industrial hygienist or other qualified professional be sought.

X. SPECIAL PRECAUTIONS

Contact immediate supervisor for specific instruction before work is initiated. Wear protective equipment and/or garments if exposure conditions warrant.

XI. ENVIRONMENTAL/SAFETY REGULATION

SARA 313

As of the preparation date, this product did not contain a chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

DEPARTMENT OF TRANSPORTATION

Shipping Name: NA

Hazard Class: NA

Hazardous Substance: NA

Cautionary Labeling: NA

NA=Not Applicable; ND=Not Determined or No Data

Date Prepared: June 14, 1995

File Name: flowzan

The data presented is true and correct to the best of our knowledge and belief; however, neither seller nor preparer make any warranties, express or implied, concerning the information presented. The user is cautioned to perform his own hazard evaluation and to rely upon his own determinations.

FLOWZAN BIOPOLYMER