

SAFETY DATA SHEET

Product Trade Name: BaraFLC™ W-437

Revision Date: 04-Jan-2016

Revision Number: 3

1. Identification

1.1. Product Identifier

Product Trade Name: BaraFLC™ W-437
Synonyms: None
Chemical Family: Carbohydrate Blend
Internal ID Code HM007956

1.2 Recommended use and restrictions on use

Application: Fluid Loss Additive

Uses Advised Against Consumer use

1.3 Manufacturer's Name and Contact Details

Manufacturer/Supplier

Baroid Fluid Services
Product Service Line of Halliburton
P.O. Box 1675
Houston, TX 77251
Telephone: (281) 575-5000
Emergency Telephone: 1-866-519-4752 (US, Canada, Mexico) or 1-760-476-3962

Halliburton Energy Services
645 - 7th Ave SW Suite 2200
Calgary, AB
T2P 4G8
Canada

Prepared By Chemical Stewardship
Telephone: 1-281-871-6107
e-mail: fdunexchem@halliburton.com

1.4. Emergency telephone number

Emergency Telephone Number 1-866-519-4752 or 1-760-476-3962

2. Hazard(s) Identification

2.1 Classification in accordance with paragraph (d) of §1910.1200

Not classified	
Serious Eye Damage / Eye Irritation	Category 2B - H320
Combustible dust	Combustible dust

2.2. Label Elements

Hazard Pictograms

Signal Word Warning

Hazard Statements

H320 - Causes mild eye irritation

May form combustible dust concentrations in air.

Precautionary Statements**Prevention**

P264 - Wash face, hands and any exposed skin thoroughly after handling

ResponseP305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/attention**Storage**

None

Disposal

None

2.3 Hazards not otherwise classified

None known

3. Composition/information on Ingredients

Substances	CAS Number	PERCENT (w/w)	GHS Classification - US
Polysaccharide	Proprietary	30 - 60%	Combustible Dust
Inorganic salt	Proprietary	10 - 30%	Eye Irrit. 2B (H320)
Inorganic chloride salt	Proprietary	1 - 5%	Eye Irrit. 2A (H319)

The specific chemical identity of the composition has been withheld as proprietary.

The exact percentage (concentration) of the composition has been withheld as proprietary.

4. First-Aid Measures**4.1. Description of first aid measures****Inhalation**

If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

Eyes

Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

Skin

Flush skin with large amounts of water. If irritation persists, get medical attention.

Ingestion

Rinse mouth with water many times. Get medical attention if symptoms occur

4.2 Most important symptoms/effects, acute and delayed

Causes eye irritation

4.3. Indication of any immediate medical attention and special treatment needed**Notes to Physician**

Treat symptomatically.

5. Fire-fighting measures**5.1. Extinguishing media****Suitable Extinguishing Media**

All standard fire fighting media

Extinguishing media which must not be used for safety reasons

None known.

5.2 Specific hazards arising from the substance or mixture**Special Exposure Hazards**

Decomposition in fire may produce harmful gases. Organic dust in the presence of an ignition source can be explosive in high

concentrations. Good housekeeping practices are required to minimize this potential.

5.3 Special protective equipment and precautions for fire-fighters

Special Protective Equipment for Fire-Fighters

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Remove sources of ignition. Avoid creating and breathing dust. Use appropriate protective equipment. Use only competent persons for cleanup. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. See Section 8 for additional information

6.2. Environmental precautions

None known.

6.3. Methods and material for containment and cleaning up

Cover powder spill with plastic sheet or tarp to minimize spreading
Scoop up and remove.

7. Handling and storage

7.1. Precautions for Safe Handling

Handling Precautions

Avoid contact with eyes, skin, or clothing. Avoid creating or inhaling dust. Use appropriate protective equipment. Avoid dust accumulations. Ensure adequate ventilation. Slippery when wet.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Information

Store away from oxidizers. Keep from heat, sparks, and open flames. Keep container closed when not in use. Store in a cool, dry location. Product has a shelf life of 36 months.

8. Exposure Controls/Personal Protection

8.1 Occupational Exposure Limits

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Polysaccharide	Proprietary	Not applicable	Not applicable
Inorganic salt	Proprietary	Not applicable	Not applicable
Inorganic chloride salt	Proprietary	Not applicable	Not applicable

8.2 Appropriate engineering controls

Engineering Controls

Localized ventilation should be used to control dust levels.

8.3 Individual protection measures, such as personal protective equipment

Personal Protective Equipment

If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

Respiratory Protection

Not normally needed. But if significant exposures are possible then the following respirator is recommended:

Dust/mist respirator. (N95, P2/P3)

Hand Protection

Use gloves which are suitable for the chemicals present in this product as well as other environmental factors in the workplace.

Skin Protection	Wear clothing appropriate for the work environment. Dusty clothing should be laundered before reuse. Use precautionary measures to avoid creating dust when removing or laundering clothing.
Eye Protection	Wear safety glasses or goggles to protect against exposure.
Other Precautions	Eyewash fountains and safety showers must be easily accessible.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Powder	Color: White to yellow
Odor: Odorless	Odor No information available
	Threshold:

<u>Property</u>	<u>Values</u>
<u>Remarks/ - Method</u>	
pH:	5-9 (1%)
Freezing Point/Range	No data available
Melting Point/Range	No data available
Boiling Point/Range	No data available
Flash Point	> 93 °C PMCC
Flammability (solid, gas)	No data available
upper flammability limit	No data available
lower flammability limit	No data available
Evaporation rate	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Specific Gravity	1.6
Water Solubility	Soluble in water
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive Properties	No information available
Oxidizing Properties	No information available

9.2. Other information

VOC Content (%)	No data available
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10. Stability and Reactivity

10.1. Reactivity

Not expected to be reactive.

10.2. Chemical Stability

Stable

10.3. Possibility of Hazardous Reactions

Will Not Occur

10.4. Conditions to Avoid

Keep away from heat, sparks and flame.

10.5. Incompatible Materials

Strong acids. Strong oxidizers. Bromine trifluoride. Sulfuric acid.

10.6. Hazardous Decomposition Products

Carbon oxides.

11. Toxicological Information

11.1 Information on likely routes of exposure

Principle Route of Exposure Eye or skin contact, inhalation. Ingestion.

11.2 Symptoms related to the physical, chemical and toxicological characteristics

Acute Toxicity

Inhalation	May cause mild respiratory irritation.
Eye Contact	Causes eye irritation.
Skin Contact	May cause mild skin irritation.
Ingestion	In large amounts: May cause abdominal pain, vomiting, nausea, and diarrhea.

Chronic Effects/Carcinogenicity No data available to indicate product or components present at greater than 0.1% are chronic health hazards.

11.3 Toxicity data

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Polysaccharide	Proprietary	27000 mg/kg (Rat)	2000 mg/kg (Rabbit)	5800 mg/m ³ (Rat) 4h
Inorganic salt	Proprietary	3000 mg/kg (Rat) 3550 mg/kg (Rat)	>10000 mg/kg (Rabbit)	42 mg/L (Rat) 1h
Inorganic chloride salt	Proprietary	> 1000 mg/kg (Rat) 2301 mg/kg (Rat) > 2000 mg/kg (Rat) 2240 mg/kg (Rat)	5000 mg/kg (Rabbit)	No data available

Substances	CAS Number	Skin corrosion/irritation
Polysaccharide		Not irritating to skin in rabbits.
Inorganic salt		Non-irritating to the skin (Rabbit)
Inorganic chloride salt		Causes mild skin irritation (Rabbit)

Substances	CAS Number	Eye damage/irritation
Polysaccharide		Non-irritating to rabbit's eye
Inorganic salt		May cause mild eye irritation. (Rabbit)
Inorganic chloride salt		Causes severe eye irritation. (Rabbit)

Substances	CAS Number	Skin Sensitization
Polysaccharide		Did not cause sensitization on laboratory animals
Inorganic salt		No information available
Inorganic chloride salt		No information available

Substances	CAS Number	Respiratory Sensitization
Polysaccharide		No information available
Inorganic salt		No information available
Inorganic chloride salt		No information available

Substances	CAS Number	Mutagenic Effects
Polysaccharide		In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects. (similar substances)
Inorganic salt		No information available
Inorganic chloride salt		Did not show mutagenic effects in animal experiments

Substances	CAS Number	Carcinogenic Effects
Polysaccharide		Did not show carcinogenic effects in animal experiments (similar substances)
Inorganic salt		Did not show carcinogenic effects in animal experiments
Inorganic chloride salt		No information available.

Substances	CAS Number	Reproductive toxicity
Polysaccharide		Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.
Inorganic salt		Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.
Inorganic chloride salt		Animal testing did not show any effects on fertility.

Substances	CAS Number	STOT - single exposure
Polysaccharide		No information available
Inorganic salt		No information available
Inorganic chloride salt		No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	STOT - repeated exposure
Polysaccharide		No significant toxicity observed in animal studies at concentration requiring classification.
Inorganic salt		No significant toxicity observed in animal studies at concentration requiring classification.
Inorganic chloride salt		No information available.

Substances	CAS Number	Aspiration hazard
Polysaccharide		Not applicable
Inorganic salt		Not applicable
Inorganic chloride salt		Not applicable

12. Ecological Information

12.1. Toxicity

Ecotoxicity Effects

Product is not classified as hazardous to the environment.

Product Ecotoxicity Data

No data available

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Polysaccharide	Proprietary	No information available	TLM96: 10000 ppm (Oncorhynchus mykiss) LC50 (96h) 20000 mg/L (Oncorhynchus mykiss)	No information available	EC50 (48h) 1000-3300 mg/L (Crangon crangon)
Inorganic salt	Proprietary	EC50 (120h) 2430 mg/L (Nitzschia sp.)	TLM96 > 1000 mg/L (Oncorhynchus mykiss) LC50 (96h) 5840 mg/L (Lepomis macrochirus) NOEC (33d) 252 mg/L (Pimephales promelas)	NOEC 5000 – 8000 mg/L (activated sludge) NOEC 292-584 mg/L (Escherichia coli)	TLM96 > 1,000,000 ppm (Mysidopsis bahia) LC50 (48h) 874-4136 mg/L (Daphnia magna) NOEC (21d) 314 mg/L (Daphnia pulex)
Inorganic chloride salt	Proprietary	ErC50 (72h) 2900 mg/L (Pseudokirchnerella subcapitata) ErC50 (72h) 4000 mg/L (Pseudokirchnerella subcapitata)	LC50 (96h) 4630 mg/L (Pimephales promelas) LC50 (48h) >6560 mg/L (Pimephales promelas) LC50 (24h) >6660 mg/L (Pimephales promelas)	No information available	EC50 (48h) 2400 mg/L (Daphnia magna) EC50 (21d) 610 mg/L (reproduction) (Daphnia magna)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Polysaccharide	Proprietary	No information available
Inorganic salt	Proprietary	No information available
Inorganic chloride salt	Proprietary	The methods for determining biodegradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Polysaccharide	Proprietary	No information available
Inorganic salt	Proprietary	No information available

Inorganic chloride salt	Proprietary	No information available
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12.4. Mobility in soil

Substances	CAS Number	Mobility
Polysaccharide	Proprietary	No information available
Inorganic salt	Proprietary	No information available
Inorganic chloride salt	Proprietary	No information available

12.5 Other adverse effects

No information available

13. Disposal Considerations**13.1. Waste treatment methods**

Disposal Method Disposal should be made in accordance with federal, state, and local regulations.
Contaminated Packaging Follow all applicable national or local regulations.

14. Transport Information**US DOT**

UN Number: Not restricted
UN Proper Shipping Name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

US DOT Bulk

DOT (Bulk) Not applicable

Canadian TDG

UN Number: Not restricted
UN Proper Shipping Name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

IMDG/IMO

UN Number: Not restricted
UN Proper Shipping Name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

IATA/ICAO

UN Number: Not restricted
UN Proper Shipping Name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

Special Precautions for User: None

15. Regulatory Information

US Regulations

US TSCA Inventory All components listed on inventory or are exempt.

TSCA Significant New Use Rules - S5A2

Substances	CAS Number	TSCA Significant New Use Rules - S5A2
Polysaccharide	Proprietary	Not applicable
Inorganic salt	Proprietary	Not applicable
Inorganic chloride salt	Proprietary	Not applicable

EPA SARA Title III Extremely Hazardous Substances

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Polysaccharide	Proprietary	Not applicable
Inorganic salt	Proprietary	Not applicable
Inorganic chloride salt	Proprietary	Not applicable

EPA SARA (311,312) Hazard Class

None

EPA SARA (313) Chemicals

Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Polysaccharide	Proprietary	Not applicable	Not applicable
Inorganic salt	Proprietary	Not applicable	Not applicable
Inorganic chloride salt	Proprietary	Not applicable	Not applicable

EPA CERCLA/Superfund Reportable Spill Quantity

Substances	CAS Number	CERCLA RQ
Polysaccharide	Proprietary	Not applicable
Inorganic salt	Proprietary	Not applicable
Inorganic chloride salt	Proprietary	Not applicable

EPA RCRA Hazardous Waste Classification

If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.

California Proposition 65 All components listed do not apply to the California Proposition 65 Regulation.

MA Right-to-Know Law Does not apply.

NJ Right-to-Know Law Does not apply.

PA Right-to-Know Law Does not apply.

NFPA Ratings: Health 1, Flammability 1, Reactivity 0

HMIS Ratings: Health 1, Flammability 1, Reactivity 1

Canadian Regulations

Canadian DSL Inventory All components listed on inventory or are exempt.

16. Other information

Preparation Information

Prepared By

Chemical Stewardship
Telephone: 1-281-871-6107
e-mail: fdunexchem@halliburton.com

Revision Date: 04-Jan-2016

Reason for Revision	Update to Format
	SECTION:
	2
	3
	4
	5
	8
	11

Additional information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Stewardship at 1-580-251-4335.

Key or legend to abbreviations and acronyms

bw – body weight

CAS – Chemical Abstracts Service

EC50 – Effective Concentration 50%

ErC50 – Effective Concentration growth rate 50%

LC50 – Lethal Concentration 50%

LD50 – Lethal Dose 50%

LL50 – Lethal Loading 50%

mg/kg – milligram/kilogram

mg/L – milligram/liter

NIOSH – National Institute for Occupational Safety and Health

NTP – National Toxicology Program

OEL – Occupational Exposure Limit

PEL – Permissible Exposure Limit

ppm – parts per million

STEL – Short Term Exposure Limit

TWA – Time-Weighted Average

UN – United Nations

h - hour

mg/m³ - milligram/cubic meter

mm - millimeter

mmHg - millimeter mercury

w/w - weight/weight

d - day

Key literature references and sources for data

www.ChemADVISOR.com/

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End of Safety Data Sheet