

SAFETY DATA SHEET

Product Trade Name: BARAZAN®

Revision Date: 20-Jan-2016

Revision Number: 22

1. Identification

1.1. Product Identifier

Product Trade Name: BARAZAN®
Synonyms: None
Chemical Family: Polysaccharide
Internal ID Code HM003533

1.2 Recommended use and restrictions on use

Application: Viscosifier
Uses Advised Against No information available

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

Combustible dust

Combustible dust

2.2. Label Elements

Hazard Pictograms

Signal Word Warning

Hazard Statements

May form combustible dust concentrations in air.

Precautionary Statements

Prevention	None
Response	None
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
Xanthan gum	11138-66-2	60 - 100%	Combustible Dust

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	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
Skin	Wash with soap and water. Get medical attention if irritation persists.
Ingestion	Under normal conditions, first aid procedures are not required.

4.2 Most important symptoms/effects, acute and delayed

No significant hazards expected.

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**

Water fog, carbon dioxide, foam, dry chemical.

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

Use appropriate protective equipment. Avoid creating and breathing dust. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

See Section 8 for additional information

6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas.

6.3. Methods and material for containment and cleaning up

Scoop up and remove.

7. Handling and storage

7.1. Precautions for Safe Handling

Handling Precautions

Slippery when wet. Avoid creating or inhaling dust. Avoid contact with eyes, skin, or clothing. Ensure adequate ventilation. Wash hands after use. Launder contaminated clothing before reuse. Use appropriate protective equipment.

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. Store in a cool, dry location. Product has a shelf life of 24 months.

8. Exposure Controls/Personal Protection

8.1 Occupational Exposure Limits

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Xanthan gum	11138-66-2	15 mg/m ³	10 mg/m ³

8.2 Appropriate engineering controls

Engineering Controls Use in a well ventilated area.

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 Normal work gloves.

Skin Protection Normal work coveralls.

Eye Protection Wear safety glasses or goggles to protect against exposure.

Other Precautions None known.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Powder

Color: White to off white

Odor: Slight

Odor No information available

Threshold:

<u>Property</u> <u>Remarks/ - Method</u>	<u>Values</u>
pH:	7 (1%)
Freezing Point/Range	No data available
Melting Point/Range	No data available
Boiling Point/Range	No data available
Flash Point	No data available
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	204 °C / 400 °F
Decomposition Temperature	No data available
Viscosity	No data available
Explosive Properties	No information available
Oxidizing Properties	No information available
9.2. Other information	
Molecular Weight	1000000
VOC Content (%)	No data available
Bulk Density	42.5 lbs/ft3

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

None anticipated

10.5. Incompatible Materials

Strong oxidizers.

10.6. Hazardous Decomposition Products

Carbon monoxide and carbon dioxide.

11. Toxicological Information

11.1 Information on likely routes of exposure

Principle Route of Exposure Eye or skin contact, inhalation.

11.2 Symptoms related to the physical, chemical and toxicological characteristics

Acute Toxicity

Inhalation May impede respiration.

Eye Contact	Non-irritating to rabbit's eye
Skin Contact	None known.
Ingestion	None known.

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
Xanthan gum	11138-66-2	> 5000 mg/kg (Rat) > 45000 mg/kg (Rat)	No data available	> 21 mg/L (Rat) 1h > 4.25 mg/L (Rat) 4h

Substances	CAS Number	Skin corrosion/irritation
Xanthan gum	11138-66-2	Not irritating to skin in rabbits.

Substances	CAS Number	Eye damage/irritation
Xanthan gum	11138-66-2	Non-irritating to rabbit's eye

Substances	CAS Number	Skin Sensitization
Xanthan gum	11138-66-2	Did not cause sensitization on laboratory animals (guinea pig)

Substances	CAS Number	Respiratory Sensitization
Xanthan gum	11138-66-2	No sensitization responses were observed

Substances	CAS Number	Mutagenic Effects
Xanthan gum	11138-66-2	No information available

Substances	CAS Number	Carcinogenic Effects
Xanthan gum	11138-66-2	Did not show carcinogenic effects in animal experiments

Substances	CAS Number	Reproductive toxicity
Xanthan gum	11138-66-2	Animal testing did not show any effects on fertility.

Substances	CAS Number	STOT - single exposure
Xanthan gum	11138-66-2	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	STOT - repeated exposure
Xanthan gum	11138-66-2	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	Aspiration hazard
Xanthan gum	11138-66-2	Not applicable

12. Ecological Information

12.1. Toxicity

Ecotoxicity Effects

Product Ecotoxicity Data

No data available

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Xanthan gum	11138-66-2	No information available	TLM96 320-560 ppm (Oncorhynchus mykiss) LC50 (96h) 490 mg/L (Oncorhynchus mykiss)	No information available	TLM96 > 75000 ppm (Mysidopsis bahia) LC50 (48h) 980 mg/L (Daphnia magna)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Xanthan gum	11138-66-2	No information available

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Xanthan gum	11138-66-2	No information available

12.4. Mobility in soil

Substances	CAS Number	Mobility
Xanthan gum	11138-66-2	No information available

12.5 Other adverse effects

No information available

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

Disposal Method Bury in a licensed landfill according to 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
Xanthan gum	11138-66-2	Not applicable

EPA SARA Title III Extremely Hazardous Substances

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Xanthan gum	11138-66-2	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
Xanthan gum	11138-66-2	Not applicable	Not applicable

EPA CERCLA/Superfund Reportable Spill Quantity

Substances	CAS Number	CERCLA RQ
Xanthan gum	11138-66-2	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

HMS Ratings: Health 1, Flammability 1, Reactivity 0

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: 20-Jan-2016

Reason for Revision SDS sections updated:

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/

Disclaimer Statement

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End of Safety Data Sheet