

SAFETY DATA SHEET

Product Trade Name: NO-SAG®

Revision Date: 24-Jul-2018

Revision Number: 16

1. Identification

1.1. Product Identifier

Product Trade Name: NO-SAG®
Synonyms None
Chemical Family: Carbohydrate
Internal ID Code HM003705

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 Energy Services, Inc.
P.O. Box 1675
Houston, TX 77251
Telephone: (281) 871-4000

Halliburton Energy Services, Inc.
645 - 7th Ave SW Suite 1800
Calgary, AB
T2P 4G8
Canada
Telephone: 1-403-231-9300

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
Global Incident Response Access Code: 334305
Contract Number: 14012

2. Hazards 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 in a fire

Organic dust in the presence of an ignition source can be explosive in high concentrations. Good housekeeping practices are required to minimize this potential. Decomposition in fire may produce harmful gases.

5.3 Special protective equipment and precautions for fire-fighters

Special protective equipment for firefighters

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

Avoid creating or inhaling dust. Avoid contact with eyes, skin, or clothing. Ensure adequate ventilation. Slippery when wet. 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.

8. Exposure Controls/Personal Protection

8.1 Occupational Exposure Limits

| Substances | CAS Number | OSHA PEL-TWA | ACGIH TLV-TWA |
|-------------|------------|----------------|----------------|
| Xanthan gum | 11138-66-2 | Not applicable | Not applicable |

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: Solid | Color | White to yellow |
| Odor: Slight | Odor | No information available |
| | Threshold: | |

Property Values

Remarks/ - Method

| | |
|---|--------------------------|
| pH: | 7 |
| 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 | 1.5 |
| 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 |

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 | May cause mild eye irritation. |
| 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 | Serious 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

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 | Biodegradable. |

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 methods 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

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

Combustible dust

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

| Substances | CAS Number | California Proposition 65 |
|-------------|------------|---------------------------|
| Xanthan gum | 11138-66-2 | Not applicable |

U.S. State Right-to-Know Regulations

| Substances | CAS Number | MA Right-to-Know Law | NJ Right-to-Know Law | PA Right-to-Know Law |
|-------------|------------|----------------------|----------------------|----------------------|
| Xanthan gum | 11138-66-2 | Not applicable | Not applicable | Not applicable |

NFPA Ratings:

Health 0, Flammability 0, Reactivity 0

HMIS Ratings:

Health 0, Flammability 0, Physical Hazard 0

Canadian Regulations

Canadian Domestic Substances List (DSL) 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:

24-Jul-2018

Reason for Revision

SDS sections updated:
 1

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 used in the safety data sheet

bw – body weight
CAS – Chemical Abstracts Service
d - day
EC50 – Effective Concentration 50%
ErC50 – Effective Concentration growth rate 50%
h - hour
LC50 – Lethal Concentration 50%
LD50 – Lethal Dose 50%
LL50 – Lethal Loading 50%
mg/kg – milligram/kilogram
mg/L – milligram/liter
mg/m³ - milligram/cubic meter
mm - millimeter
mmHg - millimeter mercury
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
w/w - weight/weight

Key literature references and sources for data

www.ChemADVISOR.com/

Disclaimer Statement

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End of Safety Data Sheet