

## SAFETY DATA SHEET

**Product Trade Name:** NXS-LUBE®

**Revision Date:** 19-Sep-2016

**Revision Number:** 13

### 1. Identification

#### 1.1. Product Identifier

**Product Trade Name:** NXS-LUBE®  
**Synonyms** None  
**Chemical Family:** Blend  
**Internal ID Code** HM005843

#### 1.2 Recommended use and restrictions on use

**Application:** 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

Halliburton Energy Services  
645 - 7th Ave SW Suite 1800  
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  
Global Incident Response Access Code: 334305  
Contract Number: 14012

### 2. Hazard(s) Identification

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

Skin Sensitization	Category 1 - H317
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#### 2.2. Label Elements

**Hazard Pictograms**



**Signal Word:** Warning  
**Hazard Statements** H317 - May cause an allergic skin reaction

**Precautionary Statements**

**Prevention** P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
 P272 - Contaminated work clothing should not be allowed out of the workplace  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection  
**Response** P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
 P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention  
 P363 - Wash contaminated clothing before reuse  
**Storage** None  
**Disposal** P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

**2.3 Hazards not otherwise classified**

None known

**3. Composition/information on Ingredients**

Substances	CAS Number	PERCENT (w/w)	GHS Classification - US
Sulfurized Olefin	Proprietary	30 - 60%	Acute Tox. 4 (H332) Skin Sens. 1 (H317)

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

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**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** In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention.  
**Ingestion** Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

**4.2 Most important symptoms/effects, acute and delayed**

May cause allergic skin reaction.

**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**

Do NOT spray pool fires directly with water. A solid stream of water directed into hot burning liquid can cause splattering.

**5.2 Specific hazards arising from the substance or mixture**

**Special exposure hazards in a fire**

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**

Ensure adequate ventilation. Use appropriate protective equipment. Do not breathe dust/fume/gas/mist/vapors/spray. 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**

Dike far ahead of liquid spill for later disposal. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

**7. Handling and storage**

**7.1. Precautions for safe handling**

**Handling Precautions**

Do not breathe dust/fume/gas/mist/vapors/spray. Ensure adequate ventilation. Use appropriate protective equipment. Avoid contact with eyes, skin, or clothing.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

**7.2. Conditions for safe storage, including any incompatibilities**

**Storage Information**

Store in a well ventilated area.

**8. Exposure Controls/Personal Protection**

**8.1 Occupational Exposure Limits**

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Sulfurized Olefin	Proprietary	Not applicable	Not applicable

**8.2 Appropriate engineering controls**

**Engineering Controls**

Ensure adequate ventilation, especially in confined areas

**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

<b>Respiratory Protection</b>	determined by an industrial hygienist or other qualified professional based on the specific application of this product. If engineering controls and work practices cannot keep exposure below occupational exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard EN 149, AS/NZS 1715:2009, or equivalent respirator when using this product. Selection of and instruction on using all personal protective equipment, including respirators, should be performed by an Industrial Hygienist or other qualified professional.
<b>Hand Protection</b>	Use gloves which are suitable for the chemicals present in this product as well as other environmental factors in the workplace.
<b>Skin Protection</b>	Wear protective clothing appropriate for the work environment.
<b>Eye Protection</b>	Safety glasses with side-shields. If splashes are likely to occur, wear: Goggles, Face-shield.
<b>Other Precautions</b>	None known.

**9. Physical and Chemical Properties**

**9.1. Information on basic physical and chemical properties**

<b>Physical State:</b> Liquid	<b>Color</b>	Amber
<b>Odor:</b> Mild	<b>Odor</b>	No information available
	<b>Threshold:</b>	

<u>Property</u>	<u>Values</u>
Remarks/ - Method	
<b>pH:</b>	7- 8.5
<b>Freezing Point / Range</b>	No data available
<b>Melting Point / Range</b>	No data available
<b>Boiling Point / Range</b>	260 °C / 500 °F
<b>Flash Point</b>	150 °C / 302 °F Open cup
<b>Flammability (solid, gas)</b>	No data available
Upper flammability limit	No data available
Lower flammability limit	No data available
<b>Evaporation rate</b>	No data available
<b>Vapor Pressure</b>	0.001
<b>Vapor Density</b>	10
<b>Specific Gravity</b>	0.99
<b>Water Solubility</b>	Insoluble in water
<b>Solubility in other solvents</b>	No data available
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Viscosity</b>	No data available
<b>Explosive Properties</b>	No information available
<b>Oxidizing Properties</b>	No information available

**9.2. Other information**

<b>VOC Content (%)</b>	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**

Excessive heat

**10.5. Incompatible materials**

Strong oxidizers. Strong acids. Strong alkalis.

**10.6. Hazardous decomposition products**

Oxides of sulfur. Carbon monoxide and carbon dioxide. Hydrogen sulfide.

**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** None known.  
**Eye Contact** Non-irritating to rabbit's eye  
**Skin Contact** May cause an allergic skin reaction.  
**Ingestion** 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
Sulfurized Olefin	Proprietary	> 5000 mg/kg (Rat) (similar substance)	> 2000 mg/kg (Rabbit) (similar substance)	< 4.3 mg/L (Rat) 4h (similar substance)

Substances	CAS Number	Skin corrosion/irritation
Sulfurized Olefin		Not irritating to skin in rabbits. (similar substances)

Substances	CAS Number	Serious eye damage/irritation
Sulfurized Olefin		Non-irritating to rabbit's eye (similar substances)

Substances	CAS Number	Skin Sensitization
Sulfurized Olefin		May cause sensitization by skin contact (mouse) (similar substances)

Substances	CAS Number	Respiratory Sensitization
Sulfurized Olefin		No information available

Substances	CAS Number	Mutagenic Effects
Sulfurized Olefin		In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects. (similar substances)

Substances	CAS Number	Carcinogenic Effects
Sulfurized Olefin		No information available

Substances	CAS Number	Reproductive toxicity
Sulfurized Olefin		Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments. (similar substances)

Substances	CAS Number	STOT - single exposure
Sulfurized Olefin		No significant toxicity observed in animal studies at concentration requiring classification. (similar

		substances)
<b>Substances</b>	<b>CAS Number</b>	<b>STOT - repeated exposure</b>
Sulfurized Olefin		No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
<b>Substances</b>	<b>CAS Number</b>	<b>Aspiration hazard</b>
Sulfurized Olefin		No information available

**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
Sulfurized Olefin	Proprietary	EC50 (72h) >100 mg/L (Pseudokirchneriella subcapitata) (Similar substance)	LC50 (96h) >1000 mg/L (Pimephales promelas) (similar substance)	No information available	EC50 (48h) > 1000 mg/L (Daphnia magna) (Similar substance)

**12.2. Persistence and degradability**

Substances	CAS Number	Persistence and Degradability
Sulfurized Olefin	Proprietary	(0.3% @ 28d)

**12.3. Bioaccumulative potential**

Substances	CAS Number	Log Pow
Sulfurized Olefin	Proprietary	BCF = 3.16-2,818 Log Kow = 5.1 to >6

**12.4. Mobility in soil**

Substances	CAS Number	Mobility
Sulfurized Olefin	Proprietary	No information available

**12.5 Other adverse effects**

No information available

**13. Disposal Considerations**

**13.1. Waste treatment methods**

**Disposal methods** Follow all applicable community, national or regional regulations regarding waste management methods.

**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
Sulfurized Olefin	Proprietary	Not applicable

**EPA SARA Title III Extremely Hazardous Substances**

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Sulfurized Olefin	Proprietary	Not applicable

**EPA SARA (311,312) Hazard Class**

Acute Health Hazard

**EPA SARA (313) Chemicals**

Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Sulfurized Olefin	Proprietary	Not applicable	Not applicable

**EPA CERCLA/Superfund Reportable Spill Quantity**

Substances	CAS Number	CERCLA RQ
Sulfurized Olefin	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.

<b>California Proposition 65</b>	All components listed do not apply to the California Proposition 65 Regulation.
<b>MA Right-to-Know Law</b>	Does not apply.
<b>NJ Right-to-Know Law</b>	Does not apply.
<b>PA Right-to-Know Law</b>	Does not apply.
<b>NFPA Ratings:</b>	Health 1, Flammability 1, Reactivity 0
<b>HMIS Ratings:</b>	Health 1, Flammability 1, Reactivity 0

## Canadian Regulations

**Canadian Domestic Substances List (DSL)** Product contains one or more components not listed on the inventory.

## 16. Other information

### Preparation Information

**Prepared By** Chemical Stewardship  
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e-mail: fdunexchem@halliburton.com

**Revision Date:** 19-Sep-2016

**Reason for Revision** SDS sections updated:  
2  
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 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/m<sup>3</sup> - 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/](http://www.ChemADVISOR.com/)

**Disclaimer Statement**

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**End of Safety Data Sheet**