

SAFETY DATA SHEET**Product Trade Name:** **BARA-DEFOAM® 1****Revision Date:** 29-Dec-2015**Revision Number:** 14**1. Identification****1.1. Product Identifier**

Product Trade Name: BARA-DEFOAM® 1
Synonyms: None
Chemical Family: Organic hydrocarbon
Internal ID Code HM003501

1.2 Recommended use and restrictions on use

Application: Defoamer
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**

Skin Corrosion / Irritation	Category 2 - H315
Serious Eye Damage / Eye Irritation	Category 2 - H319
Specific Target Organ Toxicity - (Single Exposure)	Category 3 - H336
Acute Aquatic Toxicity	Category 2 - H401
Chronic Aquatic Toxicity	Category 2 - H411
Flammable liquids.	Category 3 - H226

2.2. Label Elements**Hazard Pictograms**

**Signal Word**

Warning

Hazard Statements

H226 - Flammable liquid and vapor
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness
H401 - Toxic to aquatic life
H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements**Prevention**

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P233 - Keep container tightly closed
P240 - Ground/Bond container and receiving equipment
P241 - Use explosion-proof electrical/ventilating/lighting/equipment
P242 - Use only non-sparking tools
P243 - Take precautionary measures against static discharge
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection

Response

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P312 - Call a POISON CENTER/doctor/physician if you feel unwell
P305 + 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
P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction
P391 - Collect spillage

Storage

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up

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
Kerosene	8008-20-6	30 - 60%	Skin Irrit. 2 (H315) STOT SE 3 (H336) Asp. Tox. 1 (H304) Aquatic Acute 2 (H401) Aquatic Chronic 2 (H411) Flam. Liq. 3 (H226)
Polyethylene glycol	Proprietary	10 - 30%	Eye Irrit. 2A (H319)
Polyalkylene glycol	Proprietary	10 - 30%	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)

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, move victim to fresh air and seek medical attention.

Eyes

In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

Skin

In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse.

Ingestion

Get medical attention! If vomiting occurs, keep head lower than hips to prevent aspiration. Rinse mouth. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms/effects, acute and delayed

Causes skin irritation. Causes eye irritation May cause headache, dizziness, and other central nervous system effects.

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**

Carbon dioxide, dry chemical, foam.

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**

May be ignited by heat, sparks or flames. Use water spray to cool fire exposed surfaces. Closed containers may explode in fire. Decomposition in fire may produce harmful gases. Runoff to sewer may cause fire or explosion hazard.

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. Wear self-contained breathing apparatus in enclosed areas.
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

Isolate spill and stop leak where safe. Remove ignition sources and work with non-sparking tools. Contain spill with sand or other inert materials. Scoop up and remove.

7. Handling and storage**7.1. Precautions for Safe Handling****Handling Precautions**

Avoid contact with eyes, skin, or clothing. Avoid breathing vapors.

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. 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
Kerosene	8008-20-6	Not applicable	TWA: 200 mg/m ³
Polyethylene glycol	Proprietary	Not applicable	Not applicable
Polyalkylene glycol	Proprietary	Not applicable	Not applicable

8.2 Appropriate engineering controls**Engineering Controls**

Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation.

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

Organic vapor respirator.

Hand Protection

Impervious rubber gloves.

Skin Protection

Rubber apron.

Eye Protection

Chemical goggles; also wear a face shield if splashing hazard exists.

Other Precautions

None known.

9. Physical and Chemical Properties**9.1. Information on basic physical and chemical properties**

Physical State: Liquid

Color:

Clear straw

Odor: Hydrocarbon

Odor

No information available

Threshold:

<u>Property</u>	<u>Values</u>
<u>Remarks/ - Method</u>	
pH:	4.3-6
Freezing Point/Range	No data available
Melting Point/Range	No data available
Boiling Point/Range	No data available
Flash Point	59 °C / 138 °F Tag Closed Cup (TCC)
Flammability (solid, gas)	No data available
upper flammability limit	6%
lower flammability limit	1.1%
Evaporation rate	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Specific Gravity	0.9815
Water Solubility	Insoluble 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

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 oxidizers.

10.6. Hazardous Decomposition Products

Carbon monoxide and carbon dioxide. Hydrocarbons.

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 cause respiratory irritation. May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.

Eye Contact
Skin Contact
Ingestion

Causes eye irritation.
 Causes skin irritation. May cause skin defatting with prolonged exposure.
 May cause headache, dizziness, nausea, vomiting, gastrointestinal irritation and central nervous system depression. Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.

Chronic Effects/Carcinogenicity Contains kerosene, a suspect animal skin carcinogen. A skin painting study with kerosene in mice has produced positive skin tumors.

11.3 Toxicity data

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Kerosene	8008-20-6	5000 mg/kg (Rat)	2000 mg/kg (Rabbit)	5.28 mg/L (Rat) 4h
Polyethylene glycol	Proprietary	No data available	No data available	No data available
Polyalkylene glycol	Proprietary	9100 mg/kg (Rat)	21200 µL/kg (Rabbit) > 2,000 mg/kg (Rabbit)	No data available

Substances	CAS Number	Skin corrosion/irritation
Kerosene	8008-20-6	Causes skin irritation. (Rabbit)
Polyethylene glycol		No information available.
Polyalkylene glycol		Causes moderate skin irritation.

Substances	CAS Number	Eye damage/irritation
Kerosene	8008-20-6	Non-irritating to rabbit's eye
Polyethylene glycol		No information available.
Polyalkylene glycol		Causes moderate eye irritation.

Substances	CAS Number	Skin Sensitization
Kerosene	8008-20-6	Did not cause sensitization on laboratory animals (guinea pig)
Polyethylene glycol		No information available
Polyalkylene glycol		No information available

Substances	CAS Number	Respiratory Sensitization
Kerosene	8008-20-6	No information available
Polyethylene glycol		No information available
Polyalkylene glycol		No information available

Substances	CAS Number	Mutagenic Effects
Kerosene	8008-20-6	In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects.
Polyethylene glycol		No information available
Polyalkylene glycol		In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects.

Substances	CAS Number	Carcinogenic Effects
Kerosene	8008-20-6	No data of sufficient quality are available.
Polyethylene glycol		No information available.
Polyalkylene glycol		No information available.

Substances	CAS Number	Reproductive toxicity
Kerosene	8008-20-6	Not regarded as a reproductive and developmental toxicant.
Polyethylene glycol		No information available
Polyalkylene glycol		Animal testing did not show any effects on fertility.

Substances	CAS Number	STOT - single exposure
Kerosene	8008-20-6	May cause disorder and damage to the Central Nervous System (CNS)
Polyethylene glycol		No information available
Polyalkylene glycol		No data of sufficient quality are available.

Substances	CAS Number	STOT - repeated exposure
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Kerosene	8008-20-6	No significant toxicity observed in animal studies at concentration requiring classification.
Polyethylene glycol		No information available
Polyalkylene glycol		No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	Aspiration hazard
Kerosene	8008-20-6	Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.
Polyethylene glycol		No information available
Polyalkylene glycol		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
Kerosene	8008-20-6	EL50 (72h) 1 - 3 mg/L (Pseudokirchnerella subcapitata)	LL50 (96h) 2 - 5 mg/L (Oncorhynchus mykiss)	No information available	EL50 (48h) 1.4 mg/L (Daphnia magna)
Polyethylene glycol	Proprietary	EC10 (30min) 7.6 mg/L (Pseudomonas subcapitata)	LC50 (96h) 5 mg/L (Oryzias latipes)	EC10 (30min) 7.6 mg/L (Pseudomonas putida)	No information available
Polyalkylene glycol	Proprietary	EL50 (72h) 333 mg/L (Pseudokirchnerella subcapitata)	LC50 (96h) 104 mg/L (Danio rerio)	EC50 (10m) > 1,000 mg/L (Activated sludge)	EL50 (48h) > 100 mg/L (Daphnia magna)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Kerosene	8008-20-6	(58.6% @ 28d)
Polyethylene glycol	Proprietary	No information available
Polyalkylene glycol	Proprietary	Readily biodegradable (79% @ 28d)

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Kerosene	8008-20-6	No information available
Polyethylene glycol	Proprietary	No information available
Polyalkylene glycol	Proprietary	1.18-4.37

12.4. Mobility in soil

Substances	CAS Number	Mobility
Kerosene	8008-20-6	No information available
Polyethylene glycol	Proprietary	No information available
Polyalkylene glycol	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: UN1223
 UN Proper Shipping Name: Kerosene Solution
 Transport Hazard Class(es): 3
 Packing Group: III
 Environmental Hazards: Marine Pollutant
 NAERG: NAERG 128

US DOT Bulk

DOT (Bulk) Not applicable

Canadian TDG

UN Number: UN1223
 UN Proper Shipping Name: Kerosene Solution
 Transport Hazard Class(es): 3
 Packing Group: III
 Environmental Hazards: Marine Pollutant

IMDG/IMO

UN Number: UN1223
 UN Proper Shipping Name: Kerosene Solution
 Transport Hazard Class(es): 3
 Packing Group: III
 Environmental Hazards: Marine Pollutant
 EMS: EmS F-E, S-E

IATA/ICAO

UN Number: UN1223
 UN Proper Shipping Name: Kerosene Solution
 Transport Hazard Class(es): 3
 Packing Group: III
 Environmental Hazards: Marine Pollutant

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
Kerosene	8008-20-6	Not applicable
Polyethylene glycol	Proprietary	Not applicable
Polyalkylene glycol	Proprietary	Not applicable

EPA SARA Title III Extremely Hazardous Substances

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Kerosene	8008-20-6	Not applicable
Polyethylene glycol	Proprietary	Not applicable
Polyalkylene glycol	Proprietary	Not applicable

EPA SARA (311,312) Hazard Class

Acute Health Hazard
Fire Hazard

EPA SARA (313) Chemicals

Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Kerosene	8008-20-6	Not applicable	Not applicable
Polyethylene glycol	Proprietary	Not applicable	Not applicable
Polyalkylene glycol	Proprietary	Not applicable	Not applicable

EPA CERCLA/Superfund Reportable Spill Quantity

Substances	CAS Number	CERCLA RQ
Kerosene	8008-20-6	Not applicable
Polyethylene glycol	Proprietary	Not applicable
Polyalkylene glycol	Proprietary	Not applicable

EPA RCRA Hazardous Waste Classification

If product becomes a waste, it does meet the criteria of a hazardous waste as defined by the US EPA, because of:

Ignitability D001

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

MA Right-to-Know Law One or more components listed.

NJ Right-to-Know Law One or more components listed.

PA Right-to-Know Law One or more components listed.

NFPA Ratings: Health 1, Flammability 2, Reactivity 0

HMIS Ratings: Health 1, Flammability 2, 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: 29-Dec-2015

Reason for Revision SDS sections updated:
2

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/

OSHA

ECHA C&L

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End of Safety Data Sheet