HALLIBURTON

SAFETY DATA SHEET

Product Trade Name: **QUIK-FOAM®**

Revision Date: 16-Jun-2015 **Revision Number:** 15

1. Identification

1.1. Product Identifier

Product Trade Name: QUIK-FOAM®
Synonyms: None
Chemical Family: Blend
Internal ID Code HM003746

1.2 Recommended use and restrictions on use

Application: Foaming Agent
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) 871-4000
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: 1-580-251-4335
e-mail: fdunexchem@halliburton.com

1.4. Emergency telephone number

Emergency Telephone Number (281) 575-5000

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 1 - H318
Acute Aquatic Toxicity	Category 2 - H401
Chronic Aquatic Toxicity	Category 3 - H412
Flammable liquids.	Category 3 - H226

2.2. Label Elements

Hazard Pictograms

Signal Word Danger

Hazard Statements

H226 - Flammable liquid and vapor
H315 - Causes skin irritation
H318 - Causes serious eye damage
H401 - Toxic to aquatic life
H412 - Harmful 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
P264 - Wash face, hands and any exposed skin thoroughly after handling
P273 - Avoid release to the environment
P280 - Wear protective gloves/eye protection/face protection

Response

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/physician
P370 + P378 - In case of fire: Use water spray for extinction

Storage

P403 + P235 - Store in a well-ventilated place. Keep cool

Disposal

P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

Contains

Substances	**CAS Number**
Ethanol	64-17-5
Isopropanol	67-63-0
Proprietary Component	Proprietary

2.3 Hazards not otherwise classified

None known

3. Composition/information on Ingredients

Substances	CAS Number	PERCENT (w/w)	GHS Classification - US
Ethanol	64-17-5	5 - 10%	Eye Irrit. 2A (H319) Flam. Liq. 2 (H225)
Isopropanol	67-63-0	5 - 10%	Eye Irrit. 2 (H319) STOT SE 3 (H336) Flam. Liq. 2 (H225)
Proprietary Component	Proprietary	30 - 60%	Skin Irrit. 2 (H315) Eye Corr. 1 (H318) Aquatic Acute 2 (H401) Aquatic Chronic 3 (H412)

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 Immediately flush eyes with large amounts of water for at least 30 minutes. Seek prompt medical attention.

Skin Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes Get medical attention if irritation persists.

Ingestion Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

4.2 Most important symptoms/effects, acute and delayed

Causes severe eye irritation which may damage tissue. Causes skin 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

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

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.

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.

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. Wash hands after use. Launder contaminated clothing before reuse. Ground and bond containers when transferring from one container to another.

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 away from alkalis. Keep from heat, sparks, and open flames. Keep container closed when not in use. 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
Ethanol	64-17-5	1000 ppm	STEL: 1000 ppm
Isopropanol	67-63-0	TWA: 400 ppm	TWA: 200 ppm STEL: 400 ppm
Proprietary Component	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 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: Liquid

Color: Light yellow

Odor: Alcohol

Odor Threshold: No information available

Property	Values	Remarks/ - Method

pH:	7.3-7.8
Freezing Point/Range	No data available
Melting Point/Range	No data available
Boiling Point/Range	No data available
Flash Point	23 °C / 74 °F PMCC
Flammability (solid, gas)	No data available
upper flammability limit	12%
lower flammability limit	2%
Evaporation rate	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Specific Gravity	1.02
Water Solubility	Soluble in water
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Autoignition Temperature	398 °C / 750 °F
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. Strong alkalis.

10.6. Hazardous Decomposition Products

Oxides of sulfur. Oxides of nitrogen. Ammonia. 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 cause mild respiratory irritation. May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.

Eye Contact Causes severe eye irritation which may damage tissue.

Skin Contact Causes skin irritation.

Ingestion Irritation of the mouth, throat, and stomach. May cause central nervous system depression including headache, dizziness, drowsiness, muscular weakness, incoordination, slowed reaction time, fatigue blurred vision, slurred speech, giddiness, tremors and convulsions.

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
Ethanol	64-17-5	7060 mg/kg (Rat) 10,470 mg/kg (Rat)	> 15,800 mg/kg (Rabbit) 17,100 mg/kg (Rabbit)	124.7 mg/L (Rat) 4h
Isopropanol	67-63-0	4396 mg/kg (Rat) 5840 mg/kg (Rat) 3600 mg/kg (Mouse)	12,800 mg/kg (Rat) 12,870 mg/kg (Rabbit) 6280 mg/kg (Rabbit)	72.6 mg/L (Rat) 4h > 10,000 mg/L (Rat) 6h
Proprietary Component	Proprietary	> 2000 mg/kg (Rat) (similar substance)	> 2000 mg/kg (Rabbit) (similar substance)	No data available

Substances	CAS Number	Skin corrosion/irritation
Ethanol	64-17-5	Not irritating to skin in rabbits.
Isopropanol	67-63-0	Non-irritating to the skin (Rabbit)
Proprietary Component		Skin, rabbit: Causes moderate skin irritation. (similar substances)

Substances	CAS Number	Eye damage/irritation
Ethanol	64-17-5	Causes moderate eye irritation. (Rabbit)
Isopropanol	67-63-0	Causes severe eye irritation. (Rabbit)
Proprietary Component		May cause moderate to severe eye irritation.

Substances	CAS Number	Skin Sensitization
Ethanol	64-17-5	Did not cause sensitization on laboratory animals
Isopropanol	67-63-0	Did not cause sensitization on laboratory animals (guinea pig)
Proprietary Component		Did not cause sensitization on laboratory animals (similar substances)

Substances	CAS Number	Respiratory Sensitization
Ethanol	64-17-5	Did not cause sensitization on laboratory animals
Isopropanol	67-63-0	No information available
Proprietary Component		No information available

Substances	CAS Number	Mutagenic Effects
Ethanol	64-17-5	Not regarded as mutagenic.
Isopropanol	67-63-0	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.
Proprietary Component		In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects. (similar substances)

Substances	CAS Number	Carcinogenic Effects
Ethanol	64-17-5	Did not show carcinogenic effects in animal experiments
Isopropanol	67-63-0	Did not show carcinogenic effects in animal experiments
Proprietary Component		Did not show carcinogenic effects in animal experiments (similar substances)

Substances	CAS Number	Reproductive toxicity
Ethanol	64-17-5	Animal testing did not show any effects on fertility.
Isopropanol	67-63-0	No significant toxicity observed in animal studies at concentration requiring classification.
Proprietary Component		Did not show teratogenic effects in animal experiments. Not a confirmed reproductive toxicant. (similar substances)

Substances	CAS Number	STOT - single exposure
Ethanol	64-17-5	No significant toxicity observed in animal studies at concentration requiring classification.
Isopropanol	67-63-0	May cause headache, dizziness, and other central nervous system effects.
Proprietary Component		No data of sufficient quality are available.

Substances	CAS Number	STOT - repeated exposure

Ethanol	64-17-5	No significant toxicity observed in animal studies at concentration requiring classification.
Isopropanol	67-63-0	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Proprietary Component		No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)

Substances	**CAS Number**	**Aspiration hazard**
Ethanol	64-17-5	Not applicable
Isopropanol	67-63-0	Not applicable
Proprietary Component		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**
Ethanol	64-17-5	No information available	LC50 > 100 mg/L (Pimephales promelas)	No information available	LC50 9268 - 14,221 mg/L (Daphnia magna) LC50 5012 mg/L (Ceridaphnia dubia) NOEC 9.6 mg/L (Daphnia magna)
Isopropanol	67-63-0	EC50 (72h) > 1000 mg/L (Desmodesmus subspicatus) EC50 (7d) 1800 mg/L (Scenedesmus quadricauda)	LC50 (96h) 9640 mg/L (Pimephales promelas) LC50 (7d) 7060 mg/L (Poecilia reticulata)	TT (16h) 1050 mg/L (Pseudomonas putida)	EC50 (48h) 13,299 mg/L (Daphnia magna) EC50 (24h) > 10,000 mg/L (Daphnia magna)
Proprietary Component	Proprietary	EC50 (5d) 101 mg/L (Selenastrum capricornutum) (similar substance)	NOEC (28d) 0.12 mg/L (Oncorhynchus mykiss) (similar substance)	EC50 (3h) > 1600 mg/L (similar substance)	EC50 (48h) 3.43 mg/L (Ceriodaphnia dubia) (similar substance) EC50 (24h) 21 mg/L (Daphnia magna) (similar substance) EC50 (96h) 5.7 mg/L (Daphnia magna) (similar substance) NOEC (7d) 0.34 mg/L (Ceriodaphnia dubia) (similar substance) NOEC (21d) 16.5 mg/L (Daphnia magna) (similar substance) NOEC (7d) 6.3 mg/L (Ceriodaphnia dubia) (similar substance)

12.2. Persistence and degradability

Substances	**CAS Number**	**Persistence and Degradability**
Ethanol	64-17-5	No information available
Isopropanol	67-63-0	Readily biodegradable (53% @ 5d)
Proprietary Component	Proprietary	Readily biodegradable (similar substances)

12.3. Bioaccumulative potential

Substances	**CAS Number**	**Log Pow**
Ethanol	64-17-5	-0.32

Isopropanol	67-63-0	0.05
Proprietary Component	Proprietary	No information available

12.4. Mobility in soil

Substances	CAS Number	Mobility
Ethanol	64-17-5	No information available
Isopropanol	67-63-0	KOC = 1.5
Proprietary Component	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: UN1993
UN Proper Shipping Name: Flammable Liquid, N.O.S. (Contains Ethanol, Isopropanol)
Transport Hazard Class(es): 3
Packing Group: III
Environmental Hazards: Not applicable
NAERG: NAERG 128
Not Restricted when shipped in containers less than 119 gallons as authorized by 49 CFR 173.150(e)(1) and 49 CFR 173.150(f)(2).

US DOT Bulk
DOT (Bulk) Not applicable

Canadian TDG
UN Number: UN1993
UN Proper Shipping Name: Flammable Liquid, N.O.S. (Contains Ethanol, Isopropanol)
Transport Hazard Class(es): 3
Packing Group: III
Environmental Hazards: Not applicable

IMDG/IMO
UN Number: UN1993
UN Proper Shipping Name: Flammable Liquid, N.O.S. (Contains Ethanol, Isopropanol)
Transport Hazard Class(es): 3
Packing Group: III
Environmental Hazards: Not applicable
EMS: EmS F-E, S-E

IATA/ICAO
UN Number: UN1993
UN Proper Shipping Name: Flammable Liquid, N.O.S. (Contains Ethanol, Isopropanol)
Transport Hazard Class(es): 3
Packing Group: III
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.

EPA SARA Title III Extremely Hazardous Substances

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Ethanol	64-17-5	Not applicable
Isopropanol	67-63-0	Not applicable
Proprietary Component	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
Ethanol	64-17-5	Not applicable	Not applicable
Isopropanol	67-63-0	1.0%	Not applicable
Proprietary Component	Proprietary	Not applicable	Not applicable

EPA CERCLA/Superfund Reportable Spill Quantity

Substances	CAS Number	CERCLA RQ
Ethanol	64-17-5	Not applicable
Isopropanol	67-63-0	Not applicable
Proprietary Component	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 The California Proposition 65 regulations apply to this product.

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 3, Reactivity 0
HMIS Ratings: Health 1, Flammability 3, Physical Hazard 0 , PPE: H

Canadian Regulations

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

16. Other information

Preparation Information
Prepared By Chemical Stewardship

Telephone: 1-580-251-4335
e-mail: fdunexchem@halliburton.com

Revision Date: 16-Jun-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/m^3 - 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