1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: QUIK-FOAM®

Synonyms: None
Chemical Family: Blend
Application: Foaming Agent

Manufacturer/Supplier
Baroid Fluid Services
Product Service Line of Halliburton
P.O. Box 1675
Houston, TX 77251
Telephone: (281) 871-4000
Emergency Telephone: (281) 575-5000

Prepared By
Chemical Compliance
Telephone: 1-580-251-4335
e-mail: fdunexchem@halliburton.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>SUBSTANCE</th>
<th>CAS Number</th>
<th>PERCENT</th>
<th>ACGIH TLV-TWA</th>
<th>OSHA PEL-TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>5 - 10%</td>
<td>1000 ppm</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>5 - 10%</td>
<td>200 ppm</td>
<td>400 ppm</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Hazard Overview
May cause eye, skin, and respiratory irritation. May cause headache, dizziness, and other central nervous system effects. May be absorbed through the skin. May be harmful if swallowed. Repeated overexposure may cause liver and kidney effects. Flammable.

4. FIRST AID MEASURES

Inhalation
If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.

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.

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.

Ingestion
Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

Notes to Physician
Not Applicable
5. FIRE FIGHTING MEASURES

Flash Point/Range (F): 74
Flash Point/Range (C): 23
Flash Point Method: PMCC
Autoignition Temperature (F): 750
Autoignition Temperature (C): 398
Flammability Limits in Air - Lower (%): 2
Flammability Limits in Air - Upper (%): 12

Fire Extinguishing Media: Water fog, carbon dioxide, foam, dry chemical.

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 toxic gases.

Special Protective Equipment for Fire-Fighters: Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

NFPA Ratings: Health 1, Flammability 3, Reactivity 0
HMIS Ratings: Health 1, Flammability 3, Reactivity 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures: Use appropriate protective equipment.

Environmental Precautionary Measures: Prevent from entering sewers, waterways, or low areas.

Procedure for Cleaning / Absorption: 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

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.

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 24 months.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

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.
9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Color: Light yellow
Odor: Alcohol
pH: 7.3-7.8
Specific Gravity @ 20 C (Water=1): 1.02
Density @ 20 C (lbs./gallon): 8.52
Bulk Density @ 20 C (lbs/ft3): Not Determined
Boiling Point/Range (F): Not Determined
Boiling Point/Range (C): Not Determined
Freezing Point/Range (F): Not Determined
Freezing Point/Range (C): Not Determined
Vapor Pressure @ 20 C (mmHg): Not Determined
Vapor Density (Air=1): Not Determined
Percent Volatiles: Not Determined
Evaporation Rate (Butyl Acetate=1): Not Determined
Solubility in Water (g/100ml): Soluble
Solubility in Solvents (g/100ml): Not Determined
VOCs (lbs./gallon): Not Determined
Viscosity, Dynamic @ 20 C (centipoise): 192
Viscosity, Kinematic @ 20 C (centistrokes): Not Determined
Partition Coefficient/n-Octanol/Water: Not Determined
Molecular Weight (g/mole): Not Determined

10. STABILITY AND REACTIVITY

Stability Data: Stable
Hazardous Polymerization: Will Not Occur
Conditions to Avoid
Keep away from heat, sparks and flame.
Incompatibility (Materials to Avoid)
Strong oxidizers. Strong alkalis.
Hazardous Decomposition Products
Additional Guidelines Not Applicable

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure
Eye or skin contact, inhalation.
Inhalation
May cause respiratory irritation. May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.
Skin Contact
May cause skin irritation. May be absorbed through the skin and produce effects similar to those caused by inhalation and/or ingestion.
Eye Contact
May cause eye 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. May cause kidney damage.

Aggravated Medical Conditions
None known.

Chronic Effects/Carcinogenicity
Repeated overexposure may cause liver and kidney effects.

Other Information
None known.

Toxicity Tests

Oral Toxicity:
LD50: 5840 mg/kg (Rat)

Dermal Toxicity:
Not determined

Inhalation Toxicity:
Not determined

Primary Irritation Effect:
Not determined

Carcinogenicity:
Not determined

Genotoxicity:
Not determined

Reproductive / Developmental Toxicity:
Not determined

12. ECOLOGICAL INFORMATION

Mobility (Water/Soil/Air)
Not determined

Persistence/Degradability
Not determined

Bio-accumulation
Not Determined

Ecotoxicological Information

Acute Fish Toxicity:
Not determined

Acute Crustaceans Toxicity:
Not determined

Acute Algae Toxicity:
Not determined

Chemical Fate Information
Not determined

Other Information
Not applicable

13. DISPOSAL CONSIDERATIONS

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

Land Transportation

DOT
UN1993, Flammable Liquid, N.O.S. (Contains Ethanol, Isopropanol), 3, III, (23.3 C)
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).

**DOT BULK**

**Canadian TDG**
Flammable Liquid, N.O.S.(Contains Ethanol, Isopropanol), 3, UN1993, III, (23.3 C)

**ADR**
UN1993, Flammable Liquid, N.O.S.(Contains Ethanol, Isopropanol), 3, III

**Air Transportation**

**ICAO/IATA**
UN1993, Flammable Liquid, N.O.S., 3, III
(Contains Ethanol, Isopropanol Solution)

**Sea Transportation**

**IMDG**
UN1993, Flammable Liquid, N.O.S.(Contains Ethanol, Isopropanol), 3, III, (23.3 C)
EmS F-E, S-E

**Other Shipping Information**

**Labels:**
Flammable Liquid

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**15. REGULATORY INFORMATION**

**US Regulations**

**US TSCA Inventory**
All components listed on inventory or are exempt.

**EPA SARA Title III Extremely Hazardous Substances**
Not applicable

**EPA SARA (311,312) Hazard Class**
Acute Health Hazard
Chronic Health Hazard
Fire Hazard

**EPA SARA (313) Chemicals**
This product contains toxic chemical(s) listed below which is(are) subject to the reporting requirements of Section 313 of Title III of SARA and 40 CFR Part 372:
Isopropanol/67-63-0

**EPA CERCLA/Superfund Reportable Spill Quantity**
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.

Canadian Regulations

Canadian DSL Inventory  All components listed on inventory.

WHMIS Hazard Class  B2  Flammable Liquids  D2B  Toxic Materials

16. OTHER INFORMATION

The following sections have been revised since the last issue of this MSDS
Not applicable

Additional Information  For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Material Safety Data Sheet for this or other Halliburton products, contact Chemical Compliance at 1-580-251-4335.

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***END OF MSDS***