SAFETY DATA SHEET

Product Trade Name: QUIK-FOAM®

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

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Corrosion / Irritation</td>
<td>Category 2 - H315</td>
</tr>
<tr>
<td>Serious Eye Damage / Eye Irritation</td>
<td>Category 1 - H318</td>
</tr>
<tr>
<td>Acute Aquatic Toxicity</td>
<td>Category 2 - H401</td>
</tr>
<tr>
<td>Chronic Aquatic Toxicity</td>
<td>Category 3 - H412</td>
</tr>
<tr>
<td>Flammable liquids.</td>
<td>Category 3 - H226</td>
</tr>
</tbody>
</table>

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

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

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

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

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Alcohol</td>
</tr>
<tr>
<td>Color</td>
<td>Light yellow</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
</tbody>
</table>

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):
  - upper flammability limit: No data available
  - 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

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

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>7060 mg/kg (Rat)</td>
<td>&gt; 15,800 mg/kg (Rabbit)</td>
<td>124.7 mg/L (Rat) 4h</td>
</tr>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>4396 mg/kg (Rat)</td>
<td>12,800 mg/kg (Rabbit)</td>
<td>72.6 mg/L (Rat) 4h</td>
</tr>
<tr>
<td>Proprietary Component</td>
<td>Proprietary</td>
<td>&gt; 2000 mg/kg (Rat) (similar substance)</td>
<td>&gt; 2000 mg/kg (Rabbit) (similar substance)</td>
<td>No data available</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>Eye damage/irritation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>Causes moderate eye irritation. (Rabbit)</td>
</tr>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>Causes severe eye irritation. (Rabbit)</td>
</tr>
<tr>
<td>Proprietary Component</td>
<td>Proprietary</td>
<td>May cause moderate to severe eye irritation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>Skin Sensitization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>Did not cause sensitization on laboratory animals</td>
</tr>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>Did not cause sensitization on laboratory animals (guinea pig)</td>
</tr>
<tr>
<td>Proprietary Component</td>
<td>Proprietary</td>
<td>Did not cause sensitization on laboratory animals (similar substances)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>Respiratory Sensitization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>Did not cause sensitization on laboratory animals</td>
</tr>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>No information available</td>
</tr>
<tr>
<td>Proprietary Component</td>
<td>Proprietary</td>
<td>No information available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>Mutagenic Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>Not regarded as mutagenic.</td>
</tr>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.</td>
</tr>
<tr>
<td>Proprietary Component</td>
<td>Proprietary</td>
<td>In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects. (similar substances)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>Carcinogenic Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>Did not show carcinogenic effects in animal experiments</td>
</tr>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>Did not show carcinogenic effects in animal experiments</td>
</tr>
<tr>
<td>Proprietary Component</td>
<td>Proprietary</td>
<td>Did not show carcinogenic effects in animal experiments (similar substances)</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>STOT - repeated exposure</th>
</tr>
</thead>
</table>
12. Ecological Information

12.1. Toxicity

Ecotoxicity Effects

<table>
<thead>
<tr>
<th>Product Ecotoxicity Data</th>
<th>No data available</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Substance Ecotoxicity Data</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Substances</strong></td>
<td><strong>CAS Number</strong></td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Proprietary Component</td>
<td>Proprietary</td>
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</tr>
</tbody>
</table>

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Substances</th>
<th><strong>CAS Number</strong></th>
<th><strong>Persistence and Degradability</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>No information available</td>
</tr>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>Readily biodegradable (53% @ 5d)</td>
</tr>
<tr>
<td>Proprietary Component</td>
<td>Proprietary</td>
<td>Readily biodegradable (similar substances)</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Substances</th>
<th><strong>CAS Number</strong></th>
<th><strong>Log Pow</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>-0.32</td>
</tr>
</tbody>
</table>
Isopropanol 67-63-0 0.05
Proprietary Component Proprietary No information available

12.4. Mobility in soil

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>Mobility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>No information available</td>
</tr>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>KOC = 1.5</td>
</tr>
<tr>
<td>Proprietary Component</td>
<td>Proprietary</td>
<td>No information available</td>
</tr>
</tbody>
</table>

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
15. Regulatory Information

US Regulations

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

EPA SARA Title III Extremely Hazardous Substances

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>EPA SARA Title III Extremely Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Proprietary Component</td>
<td>Proprietary</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

EPA SARA (311,312) Hazard Class

Acute Health Hazard
Fire Hazard

EPA SARA (313) Chemicals

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>Toxic Release Inventory (TRI) - Group I</th>
<th>Toxic Release Inventory (TRI) - Group II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>1.0%</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Proprietary Component</td>
<td>Proprietary</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

EPA CERCLA/Superfund Reportable Spill Quantity

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>CERCLA RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Proprietary Component</td>
<td>Proprietary</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

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

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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/

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End of Safety Data Sheet