SECTION 1 : Identification of the substance/mixture and of the supplier

Product name : Sec-Butyl Alcohol

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: S25662

Recommended uses of the product and uses restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific
9 Barnhart Drive, Hanover, PA 17331

Supplier Details:

Fisher Science Education
15 Jet View Drive, Rochester, NY 14624

Emergency telephone number:

Fisher Science Education    Emergency Telephone No.: 800-535-5053

SECTION 2 : Hazards identification

Classification of the substance or mixture:

- **Flammable**
  - Flammable liquids, category 3

- **Irritant**
  - Skin irritation, category 2
  - Specific target organ toxicity following single exposure, category 3

- **Corrosive**
  - Serious eye damage, category 1

Flam. Liq. 3
Skin Irrit. 2
Eye Dam. 1
STOT SE 3

Signal word : Danger

Hazard statements:

- Flammable liquid and vapour
- Causes skin irritation
- Causes serious eye damage
- May cause respiratory irritation

Precautionary statements:

- If medical advice is needed, have product container or label at hand
- Keep out of reach of children
- Read label before use
- Keep away from heat/sparks/open flames/hot surfaces. No smoking
- Use only outdoors or in a well-ventilated area

Created by Global Safety Management, Inc. - Tel: 1-813-435-5161 - www.gmsds.com
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/light/equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Wear protective gloves/protective clothing/eye protection/face protection
Wash skin thoroughly after handling
Avoid breathing dust/fume/gas/mist/vapours/spray
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
In case of fire: Use agents recommended in section 5 for extinction
Specific treatment (see supplemental first aid instructions on this label)
Take off contaminated clothing and wash before reuse
IF ON SKIN: Wash with soap and water
If skin irritation occurs: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Store locked up
Store in a well ventilated place. Keep container tightly closed
Dispose of contents and container to an approved waste disposal plant

Other Non-GHS Classification:

**WHMIS**

- B3
- D2B

**NFPA/HMIS**

- NFPA SCALE (0-4)
- HMIS RATINGS (0-4)

**SECTION 3 : Composition/information on ingredients**

<table>
<thead>
<tr>
<th>Ingredients:</th>
<th>100 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS 78-92-2</td>
<td></td>
</tr>
<tr>
<td>Sec-Butyl Alcohol</td>
<td></td>
</tr>
</tbody>
</table>

Percentages are by weight
### SECTION 4: First aid measures

#### Description of first aid measures

**After inhalation:** Loosen clothing as necessary and position individual in a comfortable position. Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Get medical assistance if cough or other symptoms appear.

**After skin contact:** Rinse/flush exposed skin gently using soap and water for 15-20 minutes. Seek medical advice if discomfort or irritation persists.

**After eye contact:** Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.

**After swallowing:** Rinse mouth thoroughly. Do not induce vomiting. Seek medical attention if irritation, discomfort, or vomiting persists.

#### Most important symptoms and effects, both acute and delayed:


#### Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

### SECTION 5: Firefighting measures

#### Extinguishing media

**Suitable extinguishing agents:** Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

**For safety reasons unsuitable extinguishing agents:**

#### Special hazards arising from the substance or mixture:

Oxides of carbon. Thermal decomposition can lead to release of irritating gases and vapors.

#### Advice for firefighters:

**Protective equipment:** Wear protective eyewear, gloves, and clothing. Refer to Section 8. Use NIOSH-approved respiratory protection/breathing apparatus.

**Additional information (precautions):** Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing.

### SECTION 6: Accidental release measures

#### Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that air-handling systems are operational.

#### Environmental precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

#### Methods and material for containment and cleaning up:

Wear protective eyewear, gloves, and clothing. Refer to Section 8. Always obey local regulations. Containerize for disposal. Refer to Section 13. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Keep in suitable closed containers for disposal.

#### Reference to other sections:

### SECTION 7: Handling and storage

#### Precautions for safe handling:

Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Refer to Section 13. Do not eat, drink, smoke, or use
personal products when handling chemical substances.

**Conditions for safe storage, including any incompatibilities:**
Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly sealed. Store away from incompatible materials.

**SECTION 8 : Exposure controls/personal protection**

**Control Parameters:**
- 78-92-2, Sec-Butyl Alcohol, ACGIH TLV TWA 50 ppm
- 78-92-2, Sec-Butyl Alcohol, NIOSH TWA 50 ppm
- 78-92-2, Sec-Butyl Alcohol, OHSA PEL TWA 50 ppm

**Appropriate Engineering controls:**
Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

**Respiratory protection:**
Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

**Protection of skin:**
Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

**Eye protection:**
Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses or goggles are appropriate eye protection.

**General hygienic measures:**
Perform routine housekeeping. Wash hands before breaks and at the end of work. Avoid contact with skin, eyes, and clothing. Before wearing wash contaminated clothing.

**SECTION 9 : Physical and chemical properties**

<table>
<thead>
<tr>
<th>Appearance (physical state,color):</th>
<th>Clear, colorless liquid.</th>
<th>Explosion limit lower: Not Determined</th>
<th>Explosion limit upper: Not Determined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor:</td>
<td>Strong odor - sweet, fruity odor</td>
<td>Vapor pressure: 11.7 mbar @ 20C</td>
<td></td>
</tr>
<tr>
<td>Odor threshold:</td>
<td>Not Determined</td>
<td>Vapor density: 2.6(Air=1.0)</td>
<td></td>
</tr>
<tr>
<td>pH-value:</td>
<td>Not Determined</td>
<td>Relative density: 0.808</td>
<td></td>
</tr>
<tr>
<td>Melting/Freezing point:</td>
<td>- 115C</td>
<td>Solubilities: Partially soluble in water.</td>
<td></td>
</tr>
</tbody>
</table>
### Security Data Sheet

**Effective date:** 02.11.2015

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**Sec-Butyl Alcohol**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling point/Boiling range</td>
<td>99.5°C</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Flash point (closed cup)</td>
<td>40°C</td>
</tr>
<tr>
<td>Auto/Self-ignition temperature</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Flammability (solid, gaseous)</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Viscosity</td>
<td>a. Kinematic: Not Determined</td>
</tr>
<tr>
<td></td>
<td>b. Dynamic: Not Determined</td>
</tr>
<tr>
<td>Density</td>
<td>Not Determined</td>
</tr>
</tbody>
</table>

---

### SECTION 10: Stability and reactivity

**Reactivity:** Nonreactive under normal conditions.

**Chemical stability:** Stable under normal conditions.

**Possible hazardous reactions:** None under normal processing.

**Conditions to avoid:** Incompatible materials.

**Incompatible materials:**

**Hazardous decomposition products:** Oxides of carbon.

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### SECTION 11: Toxicological information

**Acute Toxicity:**

<table>
<thead>
<tr>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>2,460 mg/kg</td>
</tr>
<tr>
<td>LD50 Rat</td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td>4 h - 8000 ppm</td>
</tr>
<tr>
<td>LC50 Rat</td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>3,400 mg/kg</td>
</tr>
<tr>
<td>LD50 Rabbit</td>
<td></td>
</tr>
</tbody>
</table>

**Chronic Toxicity:** No additional information.

**Corrosion Irritation:** No additional information.

**Sensitization:** No additional information.

**Single Target Organ (STOT):** No additional information.

**Numerical Measures:** No additional information.

**Carcinogenicity:** No additional information.

**Mutagenicity:** No additional information.

**Reproductive Toxicity:** No additional information.

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### SECTION 12: Ecological information

**Ecotoxicity**

- **LC50 - Pimephales promelas (fathead minnow):** 1.220 mg/l - 96 h

**Persistence and degradability:**

**Bioaccumulative potential:**

**Mobility in soil:**
Other adverse effects:

SECTION 13 : Disposal considerations

Waste disposal recommendations:
Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. Product or containers must not be disposed with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

SECTION 14 : Transport information

UN-Number
1120

UN proper shipping name
Butanols

Transport hazard class(es)

Class:
3 Flammable liquids

Packing group: III

Environmental hazard:

Transport in bulk:

Special precautions for user:

SECTION 15 : Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):
Acute, Fire

SARA Section 313 (Specific toxic chemical listings):
78-92-2 Sec-Butyl alcohol

RCRA (hazardous waste code):
None of the ingredients is listed

TSCA (Toxic Substances Control Act):
All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):
None of the ingredients is listed

Proposition 65 (California):

Chemicals known to cause cancer:
None of the ingredients is listed

Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed

Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed

**Chemicals known to cause developmental toxicity:**
None of the ingredients is listed

**Canada**

**Canadian Domestic Substances List (DSL):**
All ingredients are listed.

**Canadian NPRI Ingredient Disclosure list (limit 0.1%):**
None of the ingredients is listed

**Canadian NPRI Ingredient Disclosure list (limit 1%):**
None of the ingredients is listed

**SECTION 16 : Other information**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

**GHS Full Text Phrases:**

**Abbreviations and acronyms:**
IMDG: International Maritime Code for Dangerous Goods
PNEC: Predicted No-Effect Concentration (REACH)
CFR: Code of Federal Regulations (USA)
SARA: Superfund Amendments and Reauthorization Act (USA)
RCRA: Resource Conservation and Recovery Act (USA)
TSCA: Toxic Substances Control Act (USA)
NPRI: National Pollutant Release Inventory (Canada)
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
DNEL: Derived No-Effect Level (REACH)

**Effective date:** 02.11.2015
**Last updated:** 03.19.2015