

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.14.2017

Page 1 of 9

Sec-Butyl Alcohol

SECTION 1: Identification

Product identifier

Product name: Sec-Butyl Alcohol

Product code: S25662

Recommended use of the product and restriction on use

Relevant identified uses: Not determined or not applicable.

Uses advised against: Not determined or not applicable.

Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer:

Supplier:

AquaPhoenix Scientific

860 Gitts Run Road

Hanover

PA 17331

(717) 632-1291

Fisher Science Education

6771 Silver Crest Road

Nazareth

PA 18064

800 955-1177

Emergency telephone number:

United States

Emergency Telephone No.: 800-255-3924

SECTION 2: Hazard(s) identification

GHS classification:

Flammable liquids, category 3

Eye irritation, category 2A

Specific target organ toxicity - single exposure, category 3, respiratory irritation

Specific target organ toxicity - single exposure, category 3, central nervous system

Label elements

Hazard pictograms:



Signal word: Warning

Hazard statements:

H226 Flammable liquid and vapor

H319 Causes serious eye irritation

H335 May cause respiratory irritation

H336 May cause drowsiness or dizziness

Precautionary statements:

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/light/equipment

P242 Use only non-sparking tools

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.14.2017

Page 2 of 9

Sec-Butyl Alcohol

P243 Take precautionary measures against static discharge
P280 Wear protective gloves/protective clothing/eye protection/face protection
P264 Wash skin thoroughly after handling
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P271 Use only outdoors or in a well-ventilated area
P303+P361+P353 If on skin (or hair): Immediately remove/take off all contaminated clothing. Rinse skin with water/shower
P370+P378 In case of fire: Use agents recommended in section 5 for extinction
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing
P304+P340+P312 If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell
P405 Store locked up
P403+P233 Store in a well ventilated place. Keep container tightly closed
P501 Dispose of contents and container as instructed in Section 13

Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

| Identification | Name | Weight % |
|------------------------|-------------------|----------|
| CAS number: 78-92-2 | sec-Butyl Alcohol | >99 |

Additional Information: None

SECTION 4: First aid measures

Description of first aid measures

General notes:

Not determined or not applicable.

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position
Maintain an unobstructed airway
Get medical advice/attention if you feel unwell
Move exposed individual to fresh air
Call a POISON CONTROL CENTER or seek medical attention if you feel unwell

After skin contact:

Rinse affected area with soap and water
If symptoms develop or persist, seek medical attention

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes
If symptoms develop or persist, seek medical attention
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
Seek medical attention if irritation, discomfort, or vomiting persists

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Not determined or not applicable.

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.14.2017

Page 3 of 9

Sec-Butyl Alcohol

Delayed symptoms and effects:

Not determined or not applicable.

Immediate medical attention and special treatment

Specific treatment:

Not determined or not applicable.

Notes for the doctor:

Not determined or not applicable.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Use Water (fog only), dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam

Unsuitable extinguishing media:

Not determined or not applicable.

Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors

Vapors can flow to distant ignition sources and flashback

Liquid is volatile and may generate an explosive atmosphere

Special protective equipment for firefighters:

Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

Special precautions:

Shut off sources of ignition

Carbon monoxide and carbon dioxide may form upon combustion

Heating causes a rise in pressure, risk of bursting and combustion

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation

Ensure air handling systems are operational

Wear protective eye wear, gloves and clothing

Beware of vapors accumulating to form explosive concentrations

Vapors can accumulate in low areas

Environmental precautions:

Should not be released into the environment

Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing

Use spark-proof tools and explosion-proof equipment

Absorb with non-combustible liquid-binding material (sand, diatomaceous earth (clay), acid binders, universal binders)

Dispose of contents / container in accordance with local regulations

Reference to other sections:

Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:

Use only with adequate ventilation.

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.14.2017

Page 4 of 9

Sec-Butyl Alcohol

Avoid breathing mist or vapor.

Do not eat, drink, smoke or use personal products when handling chemical substances.

Take precautionary measures against electrostatic discharges.

Use only non-sparking tools.

Conditions for safe storage, including any incompatibilities:

Keep container tightly sealed.

Protect from freezing and physical damage.

Store in a cool, well-ventilated area.

Store away from all ignition sources (open flames, hot surfaces, direct sunlight, spark sources).

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

| Country (Legal Basis) | Substance | Identifier | Permissible concentration |
|-----------------------|-------------------|------------|---|
| United States (OSHA) | sec-Butyl Alcohol | 78-92-2 | The 8-Hour Exposure Limit (TLV-TWA) is: 450 mg/m ³ |
| | sec-Butyl Alcohol | 78-92-2 | The 8-Hour Exposure Limit (TLV-TWA) is: 150 ppm |
| NIOSH | sec-Butyl Alcohol | 78-92-2 | The 8-Hour Exposure Limit (TLV-TWA) is: 305 mg/m ³ |
| | sec-Butyl Alcohol | 78-92-2 | The 8-Hour Exposure Limit (TLV-TWA) is: 100 ppm |
| Canada | sec-Butyl Alcohol | 78-92-2 | The 8-Hour Exposure Limit (TLV-TWA) is: 303 mg/m ³ |
| | sec-Butyl Alcohol | 78-92-2 | The 8-Hour Exposure Limit (TLV-TWA) is: 100 ppm |

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls.

Biological monitoring may also be appropriate for some substances.

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.

Use explosion-proof ventilation equipment.

Personal protection equipment

Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

Select glove material impermeable and resistant to the substance.

Wear appropriate clothing to prevent any possibility of skin contact.

Respiratory protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.14.2017

Page 5 of 9

Sec-Butyl Alcohol

General hygienic measures:

- Avoid contact with skin, eyes and clothing.
- Wash hands before breaks and at the end of work.
- Wash contaminated clothing before reuse.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

| | |
|--|----------------------------------|
| Appearance | Clear, colorless liquid |
| Odor | Strong odor - sweet, fruity odor |
| Odor threshold | Not determined or not available. |
| pH | Not determined or not available. |
| Melting point/freezing point | -115°C |
| Initial boiling point/range | 99.5°C |
| Flash point (closed cup) | 24°C |
| Evaporation rate | Not determined or not available. |
| Flammability (solid, gas) | Flammable liquid |
| Upper flammability/explosive limit | 9.8 % at 100°C |
| Lower flammability/explosive limit | 1.7 % at 100°C |
| Vapor pressure | 12 mmHg at 20°C |
| Vapor density | Not determined or not available. |
| Density | Not determined or not available. |
| Relative density | 0.808 g/cm ³ |
| Solubilities | 12.5 g/100ml at 20°C |
| Partition coefficient (n-octanol/water) | Not determined or not available. |
| Auto/Self-ignition temperature | 405°C |
| Decomposition temperature | Not determined or not available. |
| Dynamic viscosity | Not determined or not available. |
| Kinematic viscosity | Not determined or not available. |
| Explosive properties | Not determined or not available. |
| Oxidizing properties | Not determined or not available. |

Other information

| | |
|-------------------------|-------|
| Molecular Weight | 74.12 |
|-------------------------|-------|

SECTION 10: Stability and reactivity

Reactivity:

Does not react under normal conditions of use and storage.

Chemical stability:

Under normal storage conditions, peroxidizable compounds can form and accumulate peroxides which may explode when subjected to heat or shock. This material is most hazardous when peroxide levels are concentrated by distillation or evaporation.

Possibility of hazardous reactions:

None under normal conditions of use and storage.

Conditions to avoid:

High temperatures, light, ignition sources, incompatible materials.

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.14.2017

Page 6 of 9

Sec-Butyl Alcohol

Incompatible materials:

Strong oxidizing agents, strong acids, aluminum, organic peroxides, isocyanates, aliphatic amines, chromium trioxide.

Hazardous decomposition products:

Oxides of carbon.

SECTION 11: Toxicological information

Acute toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Skin corrosion/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Serious eye damage/irritation

Assessment: Causes serious eye irritation

Product data: No data available.

Substance data:

| Name | Result |
|-------------------|--------------------------------|
| sec-Butyl Alcohol | Causes serious eye irritation. |

Respiratory or skin sensitization

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

International Agency for Research on Cancer (IARC): None of the ingredients are listed.

National Toxicology Program (NTP): None of the ingredients are listed.

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment: May cause respiratory irritation May cause drowsiness or dizziness

Product data: No data available.

Substance data:

| Name | Result |
|-------------------|------------------------------------|
| sec-Butyl Alcohol | May cause respiratory irritation. |
| | May cause drowsiness or dizziness. |

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.14.2017

Page 7 of 9

Sec-Butyl Alcohol

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Information on likely routes of exposure: No data available.

Symptoms related to the physical, chemical and toxicological characteristics: No data available.

Other information: No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Chronic (long-term) toxicity

Product data: No data available.

Substance data: No data available.

Persistence and degradability

Product data: No data available.

Substance data: No data available.

Bioaccumulative potential

Product data: No data available.

Substance data: No data available.

Mobility in soil

Product data: No data available.

Substance data: No data available.

Other adverse effects: No data available.


SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

SECTION 14: Transport information

United States Transportation of dangerous goods (49 CFR DOT)

| | |
|-------------------------------|---|
| UN number | UN 1120 |
| UN proper shipping name | BUTANOLS |
| UN transport hazard class(es) | 3  |
| Packing group | III |
| Environmental hazards | None |
| Special precautions for user | None |

Safety Data Sheet


According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.14.2017


Page 8 of 9

Sec-Butyl Alcohol

International Maritime Dangerous Goods (IMDG)

| | |
|-------------------------------|---|
| UN number | UN 1120 |
| UN proper shipping name | BUTANOLS |
| UN transport hazard class(es) | 3  |
| Packing group | III |
| Environmental hazards | None |
| Special precautions for user | None |

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

| | |
|-------------------------------|---|
| UN number | UN 1120 |
| UN proper shipping name | BUTANOLS |
| UN transport hazard class(es) | 3  |
| Packing group | III |
| Environmental hazards | None |
| Special precautions for user | None |

SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA):

| | | |
|---------|-------------------|--------|
| 78-92-2 | sec-Butyl Alcohol | Listed |
|---------|-------------------|--------|

Significant New Use Rule (TSCA Section 5): Not determined.

Export notification under TSCA Section 12(b): Not determined.

SARA Section 311/312 hazards:

| | | | | |
|-------|---------|------|----------|----------|
| Acute | Chronic | Fire | Pressure | Reactive |
| No | No | No | No | No |

SARA Section 302 extremely hazardous substances: Not determined.

SARA Section 313 toxic chemicals:

| | | |
|---------|-------------------|--------|
| 78-92-2 | sec-Butyl Alcohol | Listed |
|---------|-------------------|--------|

CERCLA: Not determined.

RCRA: Not determined.

Section 112(r) of the Clean Air Act (CAA): Not determined.

Massachusetts Right to Know:

| | | |
|---------|-------------------|--------|
| 78-92-2 | sec-Butyl Alcohol | Listed |
|---------|-------------------|--------|

New Jersey Right to Know:

| | | |
|---------|-------------------|--------|
| 78-92-2 | sec-Butyl Alcohol | Listed |
|---------|-------------------|--------|

New York Right to Know:

| | | |
|---------|-------------------|--------|
| 78-92-2 | sec-Butyl Alcohol | Listed |
|---------|-------------------|--------|

Pennsylvania Right to Know:

| | | |
|---------|-------------------|--------|
| 78-92-2 | sec-Butyl Alcohol | Listed |
|---------|-------------------|--------|

California Proposition 65: None of the ingredients are listed.

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.14.2017

Page 9 of 9

Sec-Butyl Alcohol

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 2-3-0

HMIS: 2-3-0

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End of Safety Data Sheet