# SAFETY DATA SHEET

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

| | |
|---|---|
| Product name | n-Butyl Alcohol |
| CAS number | 71-36-3 |
| Synonyms | n-butanol; n-butyl alcohol; butan-1-ol |

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

| | |
|---|---|
| Identified uses | Laboratory chemicals. |

### 1.3 Details of the supplier of the safety data sheet

| | |
|---|---|
| Company | Lab Alley, LLC<br>12501 Pauls Valley Road<br>Austin, Texas 78737<br>U.S.A. |
| Telephone | 512-668-9918 |
| Fax | 512-886-4008 |

### 1.4 Emergency telephone

| | | |
|---|---|---|
| **Emergency Phone #** | US & Canada: 1-800-535-5053 | INFOTRAC |
| | International 1-352-323-3500 | INFOTRAC |

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

| | |
|---|---|
| Flammable Liquids | Category 3 |
| Acute Oral Toxicty | Category 4 |
| Serious Corrosion/Irritation | Category 2 |
| Serious Eye Damage/Eye Irritation | Category 1 |
| Specific Target Organ Toxicity (single exposure) | Category 3 |

Target Organs - Respiratory system, Central nervous system (CNS)

## 2.2 GHS Label elements, including precautionary statements

Pictogram

Signal Word

Danger

Hazard statements

Flammable liquid and vapor.
Harmful if swallowed.
Causes skin irritation.
Causes serious eye damage.
May cause respiratory irritation.
May cause drowsiness or dizziness.

Precautionary statements

Prevention: Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink, or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed.
Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep cool. Get medical attention/advice if you feel unwell.

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.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with
water/shower. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical 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 SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

Fire: In case of fire, use CO2, dry chemical, or foam for extinction.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal: Dispose of contents/container to an approved waste disposal plant.

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None identified.

## SECTION 3: Composition/information on ingredients

### 3.1 Components

| Chemical name | Common name and synonyms | CAS number | Concentration |
|---|---|---|---|
| n-Butyl alcohol | n-butanol; n-butyl alcohol; butan-1-ol | 71-36-3 | > 99% |

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

**General advice**

**If inhaled** Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

**In case of skin contact** Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

**In case of eye contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

**If swallowed** Clean mouth with water and drink afterwards plenty of water.

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

Difficulty in breathing. Symptoms or overexposure may be headache, dizziness, tiredness, nausea, and vomiting.

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

Note to Physician: Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam

**Unsuitable extinguishing media** No information available.

### 5.2 Specific hazards arising from the substance or mixture

Flammable. Risk of ignition. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

### 5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### 5.4 Further information

**Flash Point** 35 °C / 95 °F

**Autoignition Temperature** 340 °C / 644 °F

**Explosion limits**

**Upper** 11.2 vol%

**Lower** 1.4 vol%

**Sensitivity to Mechanical Impact** No information available.

**Sensitivity to Static Discharge** No information available.

**NFPA**

| Health | Flammability | Instability | Physical hazards |
|---|---|---|---|
| 2 | 3 | 0 | N/A |

## SECTION 6: Accidental release measures

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

Use personal protective equipment as required. Ensure adequate ventilation.

### 6.2 Environmental precautions

Should not be released into the environment.

### 6.3 Methods and materials for containment and cleaning up

Soak up with intert absorbent material. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

See Section 2 for full list of hazard and precaution statements.

## SECTION 7: Handling and storage

## 7.1 Precautions for safe handling

**Precautions on safe handling**
Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation.

**Hygiene measures**
Handle in accordance with good industrial hygiene and safety practice.

## 7.2 Conditions for safe storage, including any incompatibilities

**Storage conditions**
Keep containers tightly closed in a dry, cool, and well-ventilated place. Keep away from heat, sparks, and flame. Flammables area.

**Incompatibilities**
Strong oxidizing agents. Reducing Agents. Acid Chlorides. Copper. Copper alloys. Acid anhydrides.

# SECTION 8: Exposure controls/personal protection

## 8.1 Occupational exposure limits

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

| Component | Type | Value | |
|---|---|---|---|
| n-Butanol | Skin: Ceiling | 50 ppm | 150 mg/m3 |
| | TWA | 100 ppm | 300 mg/m3 |

**US. ACGIH Threshold Limit Values**

| Component | Type | Value |
|---|---|---|
| n-Butanol | TWA | 20 ppm |

**US. NIOSH: Pocket Guide to Chemical Hazards**

| Component | Type | Value | |
|---|---|---|---|
| n-Butanol | IDLH | 1400 ppm | |
| | Ceiling | 50 ppm | 150 mg/m3 |

**Biological occupational exposure limits**
No information available.

## 8.2 Exposure controls

**Appropriate engineering controls**
Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal protective equipment**

**Eye/face protection**
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin protection**
Wear appropriate protective gloves.

**Body Protection**
Wear appropriate clothing to prevent skin exposure.

**Respiratory protection**
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Control of environmental exposure**
Do not let product enter drains.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| | |
|---|---|
| Physical State | Liquid |
| Appearance | Colorless |
| Odor | Alcohol-like |
| Odor Threshold | No information available |
| pH | No information available |
| Melting Point/Range | - 89 °C / -128.2 °F |
| Boiling Point/Range | 117.6 °C / 243.7 °F |
| Evaporation Rate | 0.46 |
| Flammability (solid) | Not applicable |
| Flammability or explosive limit | |
| Upper | 11.2 vol% |
| Lower | 1.4 vol% |
| Vapor Pressure | 6.7 mbar @ 20 °C |
| Vapor Density | 2.6 |
| Density | 0.81 |
| Solubility | Slightly soluble in water |
| Partition coefficient; n-octanol/water | No data available |
| Autoignition Temp | 340 °C / 644 °F |
| Decomposition Temp | No information available |
| Viscosity | 2.95 mPa.s (20 °C) |

| | |
|---|---|
| Molecular Formula | C4H10O |
| Molecular Weight | 74.12 |
| VOC Content(%) | 1.39 - 1.40 |
| Oxidizing properties | No information available |

### 9.2 Other safety information
No information available.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity
No information available.

### 10.2 Chemical stability
Stable under normal conditions.

### 10.3 Possibility of hazardous reactions
None under normal processing.

### 10.4 Conditions to avoid
Keep away from open flame, hot surfaces, and sources of ignition.

### 10.5 Incompatible materials
Strong oxidizing agents, Reducing agents, Acid chlorides, copper, copper alloys, Acid anhydrides.

### 10.6 Hazardous decomposition products
Carbon monoxide (CO), Carbon dioxide (CO2).

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

**Product Information, Component Information**

**Acute toxicity**

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---|---|---|---|
| n-Butanol | 700 mg/kg (Rat) | 3402 mg/kg (Rabbit) | 8000 ppm (Rat) |

**Skin corrosion/irritation**
Irritating to skin.

**Serious eye damage/eye irritation**
Severe eye irritant.

**Respiratory or skin sensitization**
Irritating to respiratory system.

**Germ cell mutagenicity**
No information available.

**Carcinogenicity**

| Component | CAS | IARC | NTP | ACGIH | OSHA | Mexico |
|---|---|---|---|---|---|---|
| n-Butanol | 71-36-3 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Specific target organ toxicity - single exposure**
Respiratory system, Central Nervous System (CNS).

**Specific target organ toxicity - repeated exposure**
None known.

**Reproductive toxicity**
No information available.

**Chronic effects**
No information available.

### 11.2 Additional Information
The toxicological properties have not been fully investigated.

## SECTION 12: Ecological information

### 12.1 Toxicity

| Product | | Species | Test Results | |
|---|---|---|---|---|
| n-Butanol | EC50 | P. subcapitata | 225 mg/L | 96 h |
| | EC50 | D. subspicatus | 500 mg/L | 72 h |
| | EC50 | D. subspicatus | 500 mg/L | 96 h |
| | LC50 | P. promelas | 1376 mg/L | 92 h |
| | LC50 | P. promelas | 1740 mg/L | 96 h |
| | LC50 | P. promelas | 1910000 µg/L | 96 h |
| | LC50 | P. promelas | 1730-1910 mg/L | 96 h |
| | EC50 | Microtox | 2014.4 mg/L | 5 min |
| | EC50 | Microtox | 2186 mg/L | 30 min |
| | EC50 | Microtox | 3980 mg/L | 24 h |
| | EC50 | Microtox | 4400 mg/L | 17 h |
| | EC50 | Daphnia magna | 1328 mg/L | 48 h |
| | EC50 | Daphnia magna | 1897-2072 mg/L | 48 h |
| | EC50 | Daphnia magna | 1983 mg/L | 48 h |

### 12.2 Persistence and degradability
Soluble in water. Persistence is unlikely based on information available.

### 12.3 Bio accumulative potential
No information available.

### 12.4 Mobility in soil
Will likely be mobile in the environment due to its water solubility.

### 12.5 Results of PBT and vPvB assessment
No information available.

### 12.6 Endocrine disrupting properties
No information available.

### 12.7 Other adverse effects
No information available.

## SECTION 13: Disposal considerations

### 13.1 Waste Disposal Methods

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 to ensure complete and accurate classification.

| Component | RCRA - U Series Wastes | RCRA - P Series Wastes |
|---|---|---|
| n-Butyl alcohol - 71-36-3 | U031 | - |

## SECTION 14: Transport information

**DOT (US)**

| | |
|---|---|
| UN-no | UN1120 |
| Proper Shipping Name | Butanols |
| Hazard Class | 3 |
| Packing Group | III |

**IMDG**

| | |
|---|---|
| UN-no | UN1120 |
| Proper Shipping Name | Butanols |
| Hazard Class | 3 |
| Packing Group | III |

**IATA**

| | |
|---|---|
| UN-no | UN1120 |
| Proper Shipping Name | Butanols |
| Hazard Class | 3 |
| Packing Group | III |

## SECTION 15: Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not applicable.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Listed, n-Butyl alcohol (CAS #71-36-3), RQ: 5000 lb.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous**

See Section 2 for more information.

**SARA 313 (TRI reporting)**

Listed, n-Butyl alcohol (CAS #71-36-3).

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act**

Not regulated.

**FEMA Priority Substances Respiratory Health and Safety in the Flavor**

Listed, n-Butyl alcohol (CAS #71-36-3).

**US state regulations**

**US. Massachusetts RTK - Substance List**

Listed, n-Butyl alcohol (CAS #71-36-3).

**US. New Jersey Worker and Community Right-to-Know Act**

Listed, n-Butyl alcohol (CAS #71-36-3).

**US. Pennsylvania Worker and Community Right-to-Know Law**

Listed, n-Butyl alcohol (CAS #71-36-3).

**California Proposition 65**

Not listed.

## SECTION 16: Other information

Issue date: 10/17/2018
Revision 1: 06/28/2024
Revision 2: 12/03/2024

## SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.