# SAFETY DATA SHEET

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

### 1.1 Product identifiers

| | |
|---|---|
| Product name | Potassium Hydroxide, n-Butanol Solution |
| CAS number | See section 3 |
| Synonyms | None |

### 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
Corrosive to Metals Category 1
Serious Corrosion/Irritation Category 1A
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 severe skin burns and eye damage.
May be corrosive to metals.
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.

**Response:**
Immediately call a POISON CENTER or doctor/physician.
IF INHALED: Remove victim to fresh air and keep at rest in a position comforta
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse ski
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact l
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unw
**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.
Store in corrosive-resistant polypropylene container with a resistant inliner.
**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 | > 98% |
| Potassium hydroxide | Potassium hydrate; Lye; Caustic potash | 1310-58-3 | 1-1.3% |

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

**General advice** — Show this sheet to a doctor if medical advice is needed.

**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. Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue, and danger of perforation.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** Water spray, dry chemical, alcohol-resistant foam.

**Unsuitable extinguishing media** Carbon dioxide (CO2).

### 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. The product causes burns of eyes, skin, and mucous membranes. Hazardous Combustion Products: Potassium oxides.

### 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 |
|---|---|---|---|
| 3 | 3 | 1 | 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. Evacuate personnel to safe areas. Avoid contact with skin, eyes, or clothing.

### 6.2 Environmental precautions

Should not be released into the environment. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system.

### 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

Refer to protective measures listed in Sections 7 and 8. See section 13 for proper disposal.

## SECTION 7: Handling and storage

### 7.1 Precautions for 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. If swallowed, seek immediate medical assistance.

#### 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. Acids. Acid Chlorides. Acid anhydrides. Metals. Copper. Copper alloys.

## 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 |
| Potassium hydroxide | (Vacated) Ceiling | 2 mg/m3 |

**US. ACGIH Threshold Limit Values**

| Component | Type | Value |
|---|---|---|
| n-Butanol | TWA | 20 ppm |
| Potassium hydroxide | Ceiling | 2 mg/m3 |

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

| Component | Type | Value |
|---|---|---|
| n-Butanol | IDLH | 1400 ppm |
| | Ceiling | 50 ppm 150 mg/m3 |
| Potassium hydroxide | Ceiling | 2 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 and clothing to prevent skin exposure.

**Body Protection**

Wear appropriate protective gloves and 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 | Strong, alcohol-like |
| Odor Threshold | No information available |
| pH | No information available |
| Melting Point/Range | No information available |
| Boiling Point/Range | No information available |
| Evaporation Rate | No information available |
| Flammability (solid) | No information available |
| Flammability or explosive limit | |
| Upper | No information available |
| Lower | No information available |
| Vapor Pressure | No information available |
| Vapor Density | No information available |
| Density | No information available |
| Solubility | Slightly soluble in water |
| Partition coefficient; n-octanol/water | No information available |
| Autoignition Temp | No information available |
| Decomposition Temp | No information available |
| Viscosity | No information available |
| Molecular Formula | Mixture |
| Molecular Weight | Mixture |
| VOC Content(%) | No information available |
| Oxidizing properties | No information available |

### 9.2 Other safety information

No information available.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Known reactive hazard.

### 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. Acids. Acid Chlorides. Acid anhydrides. Metals. Copper. Copper alloys.

### 10.6 Hazardous decomposition products

Carbon monoxide (CO), Carbon dioxide (CO2), Potassium oxides.

## 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) |
| Potassium hydroxide | 333-384 mg/kg | - | - |

**Skin corrosion/irritation**

Causes severe burns by all exposure routes.

**Serious eye damage/eye irritation**

Causes severe burns by all exposure routes.

**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 |
| Potassium hydroxide | 1210- | 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

Do not empty into drains. Large amounts will affect pH and harm aquatic organisms. Contains a substance which is harmful to aquatic organisms.

| Component | | 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.

## SECTION 14: Transport information

### DOT (US)

| | |
|---|---|
| UN Number | UN1120 |
| Proper Shipping name | Butanol Solution |
| Hazard Class | 3 |
| Packaging Group | III |

### IMDG

| | |
|---|---|
| UN Number | UN1120 |
| Proper Shipping name | Butanol Solution |
| Hazard Class | 3 |
| Packaging Group | III |

### IATA

| | |
|---|---|
| UN Number | UN1120 |
| Proper Shipping name | Butanol Solution |
| Hazard Class | 3 |
| Packaging Group | III |

## SECTION 15: Regulatory information

**US federal regulations**

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

Not listed/applicable.

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

Listed, n-Butyl alcohol (CAS #71-36-3), RQ: 5000 lb.
Listed, Potassium hydroxide (CAS #1310-58-3), RQ: 1000 lb.

**SARA 304 Emergency release notification**

Not listed/applicable.

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

Not listed/applicable.

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

**SARA 302 Extremely hazardous substance**

Not listed/applicable.

**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 listed/applicable.

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

Not listed/applicable.

**Safe Drinking Water Act**

Listed, Potassium hydroxide (CAS #1310-58-3), RQ: 1000 lb.

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

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

**US state regulations**

**US. Massachusetts RTK - Substance List**

Listed, n-Butyl alcohol (CAS #71-36-3).
Listed, Potassium hydroxide (CAS #1310-58-3), RQ: 1000 lb.

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

Listed, n-Butyl alcohol (CAS #71-36-3).
Listed, Potassium hydroxide (CAS #1310-58-3), RQ: 1000 lb.

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

Listed, n-Butyl alcohol (CAS #71-36-3).
Listed, Potassium hydroxide (CAS #1310-58-3), RQ: 1000 lb.

**California Proposition 65**

Not listed.

## SECTION 16: Other information

Date of Issue: 7/9/2025

## 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.