

Section 1 Chemical Product and Company Information

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CHEMTREC 24 Hour Emergency
Phone Number (800) 424-9300
For laboratory use only.
Not for drug, food or household use.

Product n-BUTYL ALCOHOL

Synonyms 1-Butanol / n-Butanol

Section 2 Hazards Identification

Signal word: DANGER

Pictograms: GHS02 / GHS05 / GHS07

Target organs: Central nervous system, Liver, Kidneys

**GHS Classification:**

Flammable liquid (Category 3)

Acute toxicity, oral (Category 4)

Skin irritation (Category 2)

Eye damage (Category 1)

STOT-SE (Category 3)

STOT-SE (Category 3)

GHS Label information: Hazard statement:

H226: Flammable liquid and vapour.

H302: Harmful if swallowed.

H315: Causes skin irritation.

H318: Causes serious eye damage.

H335: May cause respiratory irritation.

H336: May cause drowsiness or dizziness.

Precautionary statement:

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P233: Keep container tightly closed.

P241: Use explosion-proof electrical/ventilating/lighting equipment.

P242: Use only non-sparking tools.

P243: Take precautionary measures against static discharge.

P261: Avoid breathing mist/vapours/spray.

P264: Wash hands thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P271: Use only outdoors or in a well-ventilated area.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor.

P330: Rinse mouth.

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312: Call a POISON CENTER or doctor if you feel unwell.

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P332+P313: If skin irritation occurs: Get medical attention.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P370+P378: In case of fire: Use dry chemical, alcohol foam, carbon dioxide to extinguish.

P403+P235: Store in a well-ventilated place. Keep cool.

P233: Keep container tightly closed.

P405: Store locked up.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Ca Prop 65 - This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
n-Butyl alcohol	71-36-3	100%	200-751-6

Section 4 First Aid Measures

INGESTION: HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES SERIOUS EYE DAMAGE. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: CAUSES SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam. Water may be ineffective.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Vapors formed from this product are heavier than air and may travel along the ground to a distant source of ignition and flash back instantly. Flame may not be visible in daylight.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Remove all sources of ignition. Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances. Keep away from ignition sources.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	n-Butanol	TWA: 20 ppm / 61 mg/m ³	TWA: 100 ppm / 300 mg/m ³	STEL: C 50 ppm / C 150 mg/m ³

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: Work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Clear, colorless liquid. Odor: Characteristic odor. Odor threshold: Data not available. pH: Data not available. Melting / Freezing point: -89°C (-128°F) Boiling point: 117.5°C (242°F) Flash point: 37°C (98°F) TCC	Evaporation rate (Butyl acetate = 1): 0.43 Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: 1.4% / 11.2% Vapor pressure (mm Hg): 4.1 mm @ 20°C Vapor density (Air = 1): 2.6 Relative density (Specific gravity): 0.8108 @ 20°/20°C Solubility(ies): Moderately soluble in water.	Partition coefficient: (n-octanol / water): Log Pow: 0.88 Auto-ignition temperature: Data not available Decomposition temperature: Data not available Viscosity: Data not available Molecular formula: CH ₃ (CH ₂) ₃ OH Molecular weight: 74.12
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Section 10 Stability & Reactivity

Chemical stability: Stable

Hazardous polymerization: Will not occur.

Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition. Do not concentrate, as the formation of explosive peroxides may occur.

Incompatible materials: Strong mineral acids, strong oxidizers, copper and it's alloys.

Hazardous decomposition products: Carbon oxides and unidentified organic compounds.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 790 mg/kg ; Inhalation-rat LC50: 24 mg/L/4hours

Skin corrosion/irritation: Skin-rabbit - Irritant.

Serious eye damage/irritation: Eyes-rabbit - Highly irritating.

Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenicity: Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: Data not available

STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: Harmful if inhaled. Causes respiratory tract irritation. Vapors in higher concentrations may cause narcotic effects. Excessive inhalation of vapors may cause nasal and respiratory irritation and may cause central nervous system effects including dizziness, weakness, fatigue, nausea, headache and possible unconsciousness and even death.

Ingestion: Harmful if swallowed. May cause headache, dizziness, nausea, vomiting and general weakness.

Skin: Contact with skin may cause irritation. Prolonged or repeated contact may result in defatting and drying of the skin, causing skin irritation and dermatitis.

Eyes: Contact with eyes may cause tearing, reddening and/or swelling.

Signs and symptoms of exposure: See Potential health effects above. Exercise appropriate procedures to minimize potential hazards.

Additional information: RTECS #: EO1400000

Section 12 Ecological Information

Toxicity to fish: Pimephales promelas (fish, fresh water), LC50 = LC50: <1630 mg/L/96 hour

Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacea), EC50: 2237 mg/L/24 hours

Toxicity to algae: Scenedesmus subspicatus (Algae), EC50 = >500 mg/L/96 hours

Persistence and degradability: No data available

Bioaccumulative potential: No data available

Mobility in soil: No data available

PBT and vPvB assessment: No data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: UN1120

Shipping name: Butanols

Hazard class: 3

Packing group: III

Reportable Quantity: 5,000 lbs (2270 kg)



Marine pollutant: No

Exceptions: Limited quantity equal to or less than 5 L

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Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification
Butanols	Listed	5,000 lbs.	U031	Listed	Not listed	  B2; D2B

Section 16 Additional Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.