

Safety Data Sheet n-BUTYL ALCOHOL

SDS no. W5TG2H8U • Version 1.0 • Date of issue: 2024-06-19

SECTION 1: Identification

GHS Product identifier

Product name n-BUTYL ALCOHOL

Other means of identification

Name	Product Code
n-BUTYL ALCOHOL AR	BA012
n-BUTYL ALCOHOL TG	BT012
1-Butanol, Butan-1-ol, Propyl carbinol, 1-Hydroxybutane, Butyric alcohol, Butyl alcohol, n-Butanol	

Recommended use of the chemical and restrictions on use

Solvent for fats, waxes, resins, shellac, varnish, manufacture of lacquers, rayon, detergents, esters, glycol ethers, butyl acrylate and other butyl compounds, hydraulic fluids, dehydration agent, plasticisers, dyeing agent, intermediate and laboratory reagent.

Supplier's details

Name	ChemSupply Australia Pty Ltd
Address	38-50 Bedford Street 5013 Gillman South Australia Australia
Telephone	08 8440 2000
email	www.chemsupply.com.au

Emergency phone number

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

SECTION 2: Hazard identification

General hazard statement

Dangerous goods of Class 3 (Flammable Liquid) are incompatible in a placard load with any of the following:
Class 1, Class 2.1, if both the Class 3 and Class 2.1 dangerous goods are in bulk, Class 2.3, Class 4.2, Class 5, Class 6, if the Class 3 dangerous goods are nitromethane, Class 7.

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

Safety Data Sheet

n-BUTYL ALCOHOL

SDS no. W5TG2H8U • Version 1.0 • Date of issue: 2024-06-19

- Acute toxicity, oral, Cat. 4
- Serious eye damage/eye irritation, Cat. 1
- Skin corrosion/irritation, Cat. 2
- Specific target organ toxicity following single exposure, Cat. 3
- Flammable liquids, Cat. 3

GHS label elements, including precautionary statements

Pictograms



Signal word

Danger

Hazard statement(s)

H302	Harmful if swallowed
H315	Causes skin irritation
H318	Causes serious eye damage
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H226	Flammable liquid and vapor

Precautionary statement(s)

P261	Avoid breathing dust/fume/gas/mist/vapors/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+P312	IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell,
P302+P352	IF ON SKIN: Wash with plenty of water/soap
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor/physician
P312	Call a POISON CENTER/doctor/physician if you feel unwell.
P321	Specific treatment (see ... on this label).
P330	Rinse mouth.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container to an approved waste disposal facility
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting/...] equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

Safety Data Sheet

n-BUTYL ALCOHOL

SDS no. W5TG2H8U • Version 1.0 • Date of issue: 2024-06-19

P370+P378
P403+P235

In case of fire: Use agents recommended in Section 5 of SDS for extinction
Store in a well-ventilated place. Keep cool.

SECTION 3: Composition/information on ingredients

Mixtures

Molecular weight: 74.12

Components

Component	CAS no.	Concentration
n-Butyl alcohol (EC no.: 200-751-6; Index no.: 603-004-00-6)	71-36-3	100 % (weight)
CLASSIFICATIONS: Flammable liquids, Cat. 3; Acute toxicity, oral, Cat. 4; Specific target organ toxicity following single exposure, Cat. 3; Skin corrosion/irritation, Cat. 2; Serious eye damage/eye irritation, Cat. 1. HAZARDS: H226 - Flammable liquid and vapor; H302 - Harmful if swallowed; H315 - Causes skin irritation; H318 - Causes serious eye damage; H335 - May cause respiratory irritation; H336 - May cause drowsiness or dizziness.		

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice	For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor (at once). First Aid Facilities: Maintain eyewash fountain in work area.
If inhaled	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Consult a physician.
In case of skin contact	Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and wash before re-use. Seek medical advice if effects persist.
In case of eye contact	If contact with the eye(s) occurs, wash with copious amounts of water for approximately 15 minutes holding eyelid(s) open. Take care not to rinse contaminated water into the non-affected eye. Seek medical attention.
If swallowed	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.

Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of immediate medical attention and special treatment needed, if necessary

For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

SECTION 5: Fire-fighting measures

Suitable extinguishing media

Caution: Use of water spray when fighting fire may be inefficient.
Small fire: Use foam, dry chemical, CO₂ or water spray.
Large fire: Use foam, fog or water spray - Do NOT use water jets.

If safe to do so, move undamaged containers from the fire area. Cool containers with flooding quantities of water until well after the fire is out. Avoid getting water inside the containers.

Specific hazards arising from the chemical

Hazards from Combustion Products: Oxides of carbon.

HIGHLY FLAMMABLE: This product has a low flash point. Will be easily ignited by heat, sparks or flames at ambient temperatures. Vapours will form explosive mixtures with air. Vapours will travel to source of ignition and flash back. Many vapours are heavier than air and will collect in low or confined areas (drains, basements, tanks). Many liquids are lighter than water. Containers may explode on heating. Fire will produce irritating, poisonous or corrosive gases. Vapours from run-off may create an explosion hazard.

Special protective actions for fire-fighters

Wear SCBA and fully encapsulating, gas-tight suit when handling these substances. Structural firefighter's uniform is NOT effective for these materials.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid inhalation and ingestion. Avoid contact with skin, eyes and clothing.
Remove all possible sources of ignition in the surrounding area Do not breathe fumes, vapour, gas. Evacuate the area of all non-essential personnel.
Wear protective clothing specified for normal operations (see Section 8)

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks or flame) within at least 50m. All equipment used when handling the product must be earthed. Do NOT touch or walk through spilled material. Stop leak if safe to do so. Prevent entry into waterways, drains, confined areas. Vapour-suppressing foam may be used to control vapours. Water spray may be used to knock down or divert vapour clouds.
Absorb with earth, sand or other non-combustible material. Use clean, non-sparking tool to collect absorbed material and place it into loosely-covered metal or plastic containers for later disposal.
SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.

SECTION 7: Handling and storage

Precautions for safe handling

Avoid prolonged or repeated contact with skin and eyes. Avoid breathing vapour, spray or mists. Use in well ventilated areas away from all ignition sources. In case of insufficient ventilation, wear suitable respiratory equipment If you feel unwell, seek medical attention and show the label when possible. Keep material away from sparks, flames and other ignition sources.
Keep away from incompatibles. Ensure all electrical equipment is flameproofed.

Conditions for safe storage, including any incompatibilities

Keep containers closed at all times. Keep in a cool, dry, well-ventilated place. Store away from sources of heat or ignition.

SECTION 8: Exposure controls/personal protection

Control parameters

CAS: 71-36-3

Safety Data Sheet

n-BUTYL ALCOHOL

SDS no. W5TG2H8U • Version 1.0 • Date of issue: 2024-06-19

n-Butyl alcohol

ACGIH: 20 ppm TLV® in inhalation; AU/SWA (Australia): 50 Peak limitation ppm; 152 Peak limitation mg/m³ TWA inhalation;

Appropriate engineering controls

Provide sufficient ventilation to ensure that the working environment is below the TWA (time weighted average). Where vapours or mists are generated, particularly in enclosed areas, and natural ventilation is inadequate, a flame proof exhaust ventilation system is required. Refer to AS 1940-The storage and handling of flammable and combustible liquids and AS 2430-Explosive gas atmospheres for further information concerning ventilation requirements.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Skin protection

Clean impervious clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Hand Protection: Ensure hand protection complies with AS 2161, Occupational protective gloves - Selection, use and maintenance.

Body protection

Footwear: Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.

Body Protection: Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Respiratory protection

Where ventilation is not adequate, respiratory protection may be required. Avoid breathing vapours or mists. Select and use respirators in accordance with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. When mists or vapours exceed the exposure standards then the use of the following is recommended: Approved respirator with organic vapour and dust/mist filters. Filter capacity and respirator type depends on exposure levels.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	Clear, colourless liquid.
Color	No data available.
Odor	Vinous or pungent, sweet, rancid odour; characteristic.
Odor threshold	No data available.
Melting point/freezing point	-89 °C
Boiling point or initial boiling point and boiling range	117.7 °C
Flammability	No data available.
Lower and upper explosion limit/flammability limit	Flammable Limits - Lower: 1.4 Vol% Flammable Limits - Upper: 11.3 Vol%
Flash point	35 °C
Explosive properties	No data available.
Auto-ignition temperature	340 - 343 °C

Safety Data Sheet n-BUTYL ALCOHOL

SDS no. W5TG2H8U • Version 1.0 • Date of issue: 2024-06-19

Decomposition temperature
Oxidizing properties
pH
Kinematic viscosity
Solubility

No data available.
No data available.
7 (70 g/l, H₂O, 20 °C)
Viscosity: 3.0 mPa.s (3.0 cP, @ 20 °C)
Solubility in Water: Soluble in water (77g/L at 20°C) Solubility
in Organic Solvents: Soluble in alcohol, ether and most other
organic solvents.
Log P(octanol/water) = 0.88
4 mm Hg (5 hPa) @ 20 °C
0.4 (BuAc=1)
Specific Gravity: 0.81 (@ 20 °C)
2.6
No data available.

Partition coefficient n-octanol/water (log value)
Vapor pressure
Evaporation rate
Density and/or relative density
Relative vapor density
Particle characteristics

Supplemental information regarding physical hazard classes

No data available.

Further safety characteristics (supplemental)

Other Information: Dielectric constant: 17.8 (20 °C)
Dipole moment: 1.66 Debye (20 °C)
Refractive index: 1.3993 (589 nm, 20 °C)
Saturated vapour concentration: 20 g/m³ (20 °C); 39 g/m³ (30 °C)

SECTION 10: Stability and reactivity

Reactivity

Stable under normal conditions of storage and handling.

Risk of ignition. Vapours may form explosive mixtures with air

Chemical stability

Stable under ordinary conditions of storage.

Possibility of hazardous reactions

Reacts with aluminium at elevated temperatures. Contact with strong oxidising agents may cause fire and explosion. May form explosive mixtures with air. May burn near invisible flame.

Hazardous Polymerization: Will not occur.

[3V] Other Information: Alcohols may interact synergistically (enhanced effect) with chlorinated solvents, aromatic hydrocarbons or dithiocarbamates.

Conditions to avoid

Avoid storing in direct sunlight and avoid extremes of temperature.

Heat, flames and sparks.

Incompatible materials

Aluminium and alkali metals, alkaline earth metals, bases, strong acids, halogens, reducing materials, chromium trioxide, combustible materials, and strong oxidising agents such as nitrates, perchlorates, peroxides.

Hazardous decomposition products

Carbon dioxide and carbon monoxide.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Acute Toxicity - Oral: LD50 (rat): 790 mg/kg (RTECS)

Acute Toxicity - Inhalation: LC50 (rat): 8000 ppm/4h.

Ingestion: Harmful if swallowed. May have a narcotic effect. May cause abdominal discomfort, nausea, headaches, dizziness, vomiting and diarrhea. The liquid is harmful if aspirated into the lungs. Long term effects include central nervous system depression, gastrointestinal disturbances and ear, blood, liver and kidney problems.

Inhalation: May be harmful if inhaled. Vapour is irritating to mucous membranes and respiratory tract. Inhalation of vapour can result in headaches, difficult breathing, coughing, dizziness, drowsiness and possible nausea. May be absorbed into the bloodstream with symptoms similar to ingestion. Few cases of butyl alcohol poisoning (in industries) have been reported due to the low volatility. Inhalation of high concentrations can produce central nervous system depression, which can lead to loss of co-ordination, impaired judgement and, if exposure is prolonged, unconsciousness.

// ----- From the Suggestion report (11/07/2024, 11:08 AM) ----- //

The ATE (oral) of the mixture is: 500 mg/kg bw

Skin corrosion/irritation

Acute Toxicity - Dermal: LD50 (rabbit): 3400 mg/kg (RTECS).

May be harmful if absorbed by skin. Causes skin irritation. An irritant to the skin, causing a loss of natural oils. Other symptoms include crackling of the skin, drying, itching, scaling, degreasing of the skin, tingling sensation, reddening or occasionally blistering. Can be absorbed through skin with symptoms paralleling those from ingestion.

Serious eye damage/irritation

Causes severe eye irritation. Vapour concentrations above 50 ppm can irritate the eyes. Serious corneal injury (chemical burns) may occur from both the liquid and vapour. Risk of serious damage to eyes. Vapours can be irritating, causing tearing, redness, watering, itching, and pain, Splashes cause inflammation and blurred vision.

Respiratory or skin sensitization

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

Reproductive toxicity

No data available.

Summary of evaluation of the CMR properties

No data available.

Specific target organ toxicity (STOT) - single exposure

May cause respiratory irritation.

May cause drowsiness or dizziness

Specific target organ toxicity (STOT) - repeated exposure

No data available.

Aspiration hazard

No data available.

Additional information

Chronic Effects: Toxic on prolonged inhalation. Can be absorbed through the skin with resultant toxic effects. There is evidence that long-term repeated exposure to vapour concentrations greater than 50 ppm may result in some loss of hearing. Repeated or prolonged skin contact may cause dermatitis. Prolonged or over exposure can cause hearing loss, sense of balance, and affect the liver and kidney organs.

SECTION 12: Ecological information

Toxicity

Environmental Protection: Avoid contaminating waterways.

Acute Toxicity - Daphnia: EC50 (Daphnia magna): 1983 mg/l/48 h.

Other adverse effects

Other Information: Distribution: log P(o/w): 0.88

SECTION 13: Disposal considerations

Disposal methods

Product disposal

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

Other disposal recommendations

Do not discharge this material into waterways, drains and sewers.

SECTION 14: Transport information

ADG (Road and Rail)

UN Number: 1120

Class: 3

Packing Group: III

Proper Shipping Name: BUTANOLS

Hazchem emergency action code (EAC)

3[Y]

IMDG

UN Number: 1120

Class: 3

Packing Group: III

EMS Number:

Proper Shipping Name: BUTANOLS

IATA

UN Number: 1120
Class: 3
Packing Group: III
Proper Shipping Name: BUTANOLS

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Australia SUSMP

Poison Schedule: NS

SECTION 16: Other information

Further information/disclaimer

ChemSupply Australia Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon ChemSupply Australia Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of ChemSupply Australia Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

Preparation information

All information provided in this data sheet or by our technical representatives is compiled from the best knowledge available to us. However, since data, safety standards and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, we make no warranty either expressed or implied, with respect to the completeness or accuracy to the information contained herein. ChemSupply Australia Pty Ltd accepts no responsibility whatsoever for its accuracy or for any results that may be obtained by customers from using the data and disclaims all liability for reliance on information provided in this data sheet or by our technical representatives.

Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia

National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'

Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.

Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.

Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants, December 2019

Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au

IATA, Dangerous Goods Regulations (DGR)

IMO, International Maritime Dangerous Goods Code (IMDG)