

SAFETY DATA SHEET

PRODUCT NAME: n-BUTANOL

SDS Date of Issue: 10 August 2022

1. IDENTIFICATION

Product Name: n-Butanol
Other Names: Normal Butanol, 1-Butanol, N-Butyl Alcohol, Propyl Carbinol, Butyl Alcohol, Methylolpropane
Product Code: CNB20. ZBUTAN
Uses: Solvent for use in Industrial processes
Supplier: HamChem Hamilton Chemicals Ltd, 75 Ruffell Rd, Hamilton
Phone: 079744971 Email: info@hamchem.nz Web: www.hamchem.nz

- In emergency dial 111, and then ask for Fire, Ambulance or Police as necessary.
- In case of poisoning phone National Poisons Centre – 0800 764 766

2. HAZARD IDENTIFICATION



GHS Classifications:

Flammable Liquid – Category 3
Acute Toxicity (Oral) – Category 4
Skin Irritation – Category 2
Serious Eye Damage – Category 1
Specific Target Organ Toxicity (Single Exposure) Category 3 – Respiratory Tract Irritation

Signal word: Danger

Hazard Statements

H226 – Flammable Liquid and Vapour
H302 – Harmful if swallowed
H315 – Causes skin irritation
H318 – Cause serious eye damage
H335 – May cause respiratory irritation

Prevention

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
P280 – Wear protective gloves/clothing and eye/face protection
P264 – Wash hands thoroughly after handling
P270 – Do not eat, drink or smoke when using this product
P261 – Avoid breathing fumes/mist/vapours/spray
P271 – Use only outdoors or in a well-ventilated area

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HamChem Ltd, 75 Ruffell Road, Hamilton, New Zealand. Phone: 07-974-4971 Email: info@hamchem.nz Web: www.hamchem.nz

Response

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

P370+P378 – In case of fire: use water fog or mist, or alcohol-resistant foam to extinguish

P301+P312 – IF SWALLOWED: Call a Poison Centre or Doctor for advice.

P330 – Rinse mouth. Do NOT induce vomiting.

P302+P352 – IF ON SKIN: Wash with plenty of soap and water

P332+P313 – If skin irritation occurs: Get medical advice/attention

P362+P364 – Take off contaminated clothing and wash it before reuse

P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present, and easy to do so. Continue rinsing.

P310 – Immediately call a Poison Centre or Doctor

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

P312 – Call a Poison Centre or Doctor if you feel unwell

Storage

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

P233 – Keep container tightly closed

P405 – Store locked up

Disposal

P501 – Dispose of contents/container to approved solvent recycling facility or approved landfill in accordance with local/regional/national regulations

3. COMPOSITION & INFORMATION ON INGREDIENTS

Chemical Entity	CAS No.	Proportion (%)
n-Butanol	71-36-3	100

4. FIRST AID MEASURES

Consult the National Poison Centre (0800 764 766) or a Doctor in every case of suspected poisoning. If medical advice is needed, have product label or SDS at hand.

If swallowed: Rinse mouth with water. Do NOT induce vomiting. Call a Poison Centre or Doctor immediately for advice. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

If on skin: Remove immediately all contaminated clothing. Wash affected area with plenty of soap and water. Get medical advice if person feels unwell or irritation occurs. Wash contaminated clothing before reuse.

If inhaled: Remove person to fresh air and keep warm and at rest until recovered. Call a Poison Centre or Doctor for advice or take to local medical facility if person feels unwell. If breathing is difficult, give oxygen.

If in eyes: Hold eyes open and rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so, after the first 5 minutes. Continue rinsing for at least 15 minutes. Seek immediate medical attention.

Advice to Doctor: Treat symptomatically. Potential for chemical pneumonitis. Consider gastric lavage with protected airway.

5. FIRE-FIGHTING MEASURES

Extinguishing media: Use water fog or mist, or alcohol-resistant foam. Use dry chemical powder, carbon dioxide, sand or earth for small fires only. Do NOT use water in a jet.

Fire & Explosion Hazards: Above the flashpoint (38°C), vapour-air mixtures are explosive. In case of fire, avoid breathing smoke. Prevent extinguishing water from getting in to the aquatic environment.

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Specific hazards: Vapour is heavier than air, will spread across the ground and distant ignition is possible. Cool fire-exposed containers by spraying with water.

Protective equipment for firefighters: Wear self-contained breathing apparatus and personal protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Spills: Wear personal protective equipment. Avoid contact with skin and eyes. Flammable liquid and vapours. Shut off leak if safe to do so. Remove or isolate ignition sources. Take precautions against static discharge. Ventilate contaminated area. Isolate hazard area and keep unnecessary and unprotected people away from the area. Stay upwind and keep out of low-lying areas. Contain spill, avoid run-off into drain and sewers. Do not allow to enter watercourses or contaminate the ground. For large spills, more than a drum – recover liquid, and transfer by mechanical means to a labelled storage container that can be sealed for recovery or disposal. Do not flush residues away with water. Allow residues to evaporate. Remove any contaminated soil and dispose of safely by waste management company. For small spills, absorb with appropriate material, e.g., vermiculite, and dispose of waste safely in a labelled sealed container for recovery or disposal. If contamination of drains, sewers, or waterways occurs immediately notify Emergency Services (111).

Disposal: Dispose of contaminated waste or product to a solvent recycling facility or to an approved landfill in accordance with local regulations.

7. HANDLING & STORAGE

Procedure for handling: Flammable liquid and vapour. Read label before use. Keep container closed when not in use. Use only in well-ventilated areas. No smoking. Avoid breathing vapours or direct contact with product. Wear personal protective equipment. Wash hands and exposed skin after handling. Do not eat, drink or smoke when using. Remove or isolate ignition sources. Avoid sparks. Electrostatic charge may be generated during pumping with risk of fire. Restrict line viscosity to avoid generation of electrostatic discharge (<1m/sec until fill pipe submerged to twice its diameter, then <7m/sec). Take precautions to use bonded or grounded (earthed) equipment. Do not use compressed air for filling, discharging or handling.

Suitable container: For containers or container linings, use mild steel or stainless steel. For container paints, use epoxy paint or zinc silicate paint.

Storage requirements: Ensure all areas have adequate fire-fighting equipment. Store securely in closed original container in a cool, dry, well-ventilated place, away from sunlight, ignition sources, heat, incompatible substances, aerosols, other flammables, oxidising agents, and corrosives, out of reach of children, and away from food, drink and animal foodstuffs. Vapour heavier than air. Take precautions to avoid vapour accumulation in pits and confined spaces.

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

Exposure standards: NZ Workplace Exposure Standards (WES) have been set by Worksafe NZ for this substance (April 2022)

n-Butyl alcohol (71-36-3) Ceiling: 50ppm (150mg/m³) skin

Engineering controls: Use only in a well-ventilated area. A half-face filter mask suitable for organic gases and vapours is recommended. Otherwise, use a full-face mask. Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use positive pressure breathing apparatus.

Personal protective equipment: Wear protective clothing. Safety shoes and boots need to be chemically resistant. Wear appropriate chemical resistant gloves, e.g., PVC or Viton may be suitable. Wear chemical goggles if splash or aerosol/mist exposure risk. Refer to the relevant AS/NZ Standards for appropriate personal protective equipment.

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9. PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, colourless liquid
Odour	Sweet, pungent
Odour Threshold	Not available
pH	Not applicable
Specific Gravity	0.81
Melting Point/Freezing Point (°C)	-89
Initial Boiling Point (°C)	117
Flash Point (°C)	38
Flammability	Not applicable
Upper/Lower Flammability	1.4 to 11.2 (%v/v)
Vapour Pressure	5kPa at 20°C
Vapour Density	3
Solubility	Partially miscible
Partition Coefficient (n-octanol/water)	Not available
Auto-ignition Temperature (°C)	Not available
Decomposition Temperature (°C)	Not available
Kinematic Viscosity	Not available
Particle Characteristics	Not available

10. STABILITY & REACTIVITY

Stability: Stable under normal conditions of storage and use.

Hazardous decomposition products: Dependent on conditions under which the decomposition occurs; gases (carbon monoxide, carbon dioxide and other compounds) will be evolved.

Hazardous polymerization: Not known to occur.

Incompatibles: Strong oxidising agents, reducing agents, slightly reactive with organic materials, acids, alkalis.

Conditions to avoid: Avoid heat, sparks, open flames, and other ignition sources.

11. TOXICOLOGICAL INFORMATION

Toxicity data: Oral, rat LD50, 790mg/kg b.w. Dermal, rabbit LD50, 3400mg/kg. Inhalation, rat LC50 (4hr) 12.5-28.8mg/L

Acute Toxicity: Harmful if swallowed, inhaled or in contact with skin. Symptoms of exposure may include headache, nausea, fatigues and dizziness.

Aspiration Hazard: Not classified with aspiration hazard however, aspiration into the lungs can cause chemical pneumonitis which can be fatal.

Respiratory Irritation: Inhalation of vapours may be irritating to the respiratory system

Skin Corrosion/Irritation: Skin irritant. May be absorbed through skin.

Serious Eye Damage/Irritation: Severely irritating to the eyes. Symptoms can include burning sensation, redness, swelling and/or blurred vision.

12. ECOLOGICAL INFORMATION

Ecotoxicity (Aquatic & Terrestrial): This product has been classified as being harmful to terrestrial vertebrates.

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Persistence & degradability: Expected to be biodegradable.

Bioaccumulative potential: Not expected to bio accumulate significantly.

Mobility in soil: Product has some solubility in water but may be mobile in soil. May contaminate groundwater. Avoid contamination of drains and waterways.

Other adverse effects: Not available.

13. DISPOSAL CONSIDERATIONS

Appropriate disposal methods: Recover and recycle product through solvent recovery whenever possible. Send clean, dry drums to recycling facility or scrap metal reclaimer. Dispose of waste in accordance with Regional Authority or Local Council bylaws.

Special precautions: Ensure empty containers are vented and dry. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums. Do not use empty drums for storing other products.

14. TRANSPORT INFORMATION

UN Number:	1120
UN Proper Shipping name:	BUTANOLS
UN Dangerous Goods Class:	3 – Flammable Liquid
UN Packing group:	III
HAZCHEM:	2Y

15. REGULATORY INFORMATION

HSNO Approval number:	HSR001096
HSNO Classifications:	3.1C, 6.1D, 6.3A, 8.3A, 6.1E

16. OTHER INFORMATION

Key to abbreviations:

CAS No. Chemical Abstracts Service Number
EPA Environmental Protection Authority
HSNO Hazardous Substances & New Organisms
STEL Short Term Exposure Limit
TWA Time Weighted Average
WES Workplace Exposure Standard

End of SDS.