

## SAFETY DATA SHEET

### 1. IDENTIFICATION

**Product Name:** *N-BUTANOL*  
**Other Name** Normal Butanol, 1-Butanol, N-Butyl Alcohol, Propyl Carbinol, Butyl Alcohol, Methylolpropane  
**Supplier:** TMK Packers Ltd  
**Address:** 2/20 Trugood Drive, East Tamaki.  
PO Box 258 031, Botany, Manukau 2163  
**Telephone:** (+64) 9 273 3753  
**Facsimile:** (+64) 9 273 3752  
**Website:** [www.tmkpackers.co.nz](http://www.tmkpackers.co.nz)  
**Emergency phone:** National Poisons Centre  
0800 POISON [ 0800 764 766]

### 2. HAZARDS 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

**Pictograms:**



**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 Statements:**

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

Product : N-BUTANOL  
Date of Issue: 3<sup>RD</sup> October, 2022

Page 1 of 6



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

**Response Statements:**

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 Statements:**

P403+P235 – Store in a well-ventilated place.  
Keep cool P233 – Keep container tightly closed  
P405 – Store locked up

**Disposal Statement:**

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 Ingredient	CAS No.	Proportion (%)
N-Butanol	71-36-3	100

**4. FIRST AID MEASURES**

For advice, contact National Poisons Centre (0800 POISON; 0800 764 766) or a doctor.  
Have product container or label available.

**Swallowed**

If swallowed, do NOT induce vomiting. Rinse mouth with water. Immediately call a POISON CENTRE or doctor for advice.

**Skin Contact**

If skin contact occurs, remove contaminated clothing and rinse skin with plenty of water. If irritation persists, get medical attention. Wash contaminated clothing before re-use.

**Eye Contact**

Hold eyelids apart and flush the eye continuously with running water. Continue flushing for at least 15 minutes. Remove contact lenses if present and easy to do, after the first 5 minutes and continue rinsing. Get



immediate medical attention.

#### **Inhalation**

Move the person to fresh air immediately. Keep person warm and at rest until recovered. Get immediate medical advice if person has symptoms or is unwell.

#### **First Aid facilities**

Provide eye baths and safety showers close to areas where splashing may occur.

#### **Advice to Doctor**

Treat according to symptoms.

## **5. FIRE FIGHTING MEASURES**

#### **Extinguishing media:**

Use an extinguishing media suitable for surrounding materials/fire. Water spray or water fog, dry chemical or alcohol foam or CO<sub>2</sub>. Do not use water 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.

#### **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.

#### **Firefighting Equipment:**

Wear self-contained breathing apparatus and personal protective clothing.

**Hazchem code:** 2Y

## **6. ACCIDENTAL RELEASE MEASURES**

#### **Emergency Procedures & Containment:**

Refer to "Fire Fighting Measures", "First Aid Measures" and "Stability and Reactivity"

#### **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:**

Product : N-BUTANOL  
Date of Issue: 3<sup>RD</sup> October, 2022

Page 3 of 6



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

## 7. HANDLING AND 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/m<sup>3</sup>) 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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Unit of measurement	Typical value
Appearance	-	Clear, Colourless liquid
Odour	-	Sweet, Pungent
Odour threshold		Not available
pH		Not applicable
Melting point/Freezing point	°C	-0.89

Product : N-BUTANOL  
Date of Issue: 3<sup>RD</sup> October, 2022

Page 4 of 6



Initial boiling point/range	°C	117
Flash Point	°C	38
Flammability (solid/gas)		Not applicable
Flammable limits	%	1.4 to 11.2 (%v/v)
Vapour Pressure @	KPa	5kPa at 20°C
Vapour Density @	kPa	3
Specific gravity @	g/ml	0.81
Solubilities		Partially miscible
Partition coefficient: n-octanol/water		Not available
Auto-ignition temperature	°C	Not available
Decomposition temperature	°C	Not available
Kinematic viscosity	cSt	Not available
Particle characteristics		Not available

The values listed are indicative of this product's physical and chemical properties.

## 10. STABILITY AND REACTIVITY

**Chemical Stability:** Stable at room temperature and pressure.  
**Conditions to avoid:** Sources of heat, overheating and other ignition sources.

### Hazardous decomposition products:

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

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

**Hazardous polymerization:** Not known to occur.

## 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.

**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  
**Shipping name:** Butanol  
**Class:** 3 – Flammable Liquid  
**Packing group:** III  
**Hazchem code:** 2Y

## 15. REGULATORY INFORMATION

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

## 16. OTHER INFORMATION

**Issue number:** 1  
**Date of Issue:** 3<sup>rd</sup> October 2022  
**Reasons for Issue:** New Product  
**Replaces:** New Product

**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 SAFETY DATA SHEET

