

SAFETY DATA SHEET

2-Butoxy Ethanol

Version 2 · issued 15 September 2026

1. IDENTIFICATION**Product Identifiers**

Product Name	2-Butoxy Ethanol
Other Names	Butoxyethanol,
Product Number(s)	11820, EMS11820
CAS Number	111-76-2

Recommended use of the chemical and restriction on use

Where and restrictions (eg. Laboratory use.), commonly used as a solvent.

Company Details

ProSciTech Pty Ltd
11 Carlton Street
KIRWAN QLD 4817
Australia
(07) 4773 9444
pst@proscitech.com
proscitech.com.au

Emergency Contact Details

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2. HAZARDS IDENTIFICATION**Classification of the substance or mixture**

GHS06 Skull and crossbones
Acute toxicity - dermal 3 H311 Toxic in contact with skin.
Acute toxicity - inhalation 3 H331 Toxic if inhaled.
GHS07
Acute toxicity - oral 4 H302 Harmful if swallowed.
Skin irritation 2 H315 Causes skin irritation.
Eye irritation 2A H319 Causes serious eye irritation.
Flammable liquids 4 H227 Combustible liquid.

Label Elements**Acute toxicity • Harmful / irritant**

Signal Words	Danger
Hazard Statement(s)	Combustible liquid. Harmful if swallowed. Toxic in contact with skin or if inhaled. Causes skin irritation. Causes serious eye irritation.

Precautionary Statement(s)	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid breathing dust/fume/gas/mist/vapours/spray Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection
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Primary route(s) of entry

Primary route of entry:
Inhalation - breathing vapours or mists
Skin absorption (dermal exposure) - very significant for this chemical because it readily penetrates the skin

Human Health**Inhalation**

Remove person to fresh air and keep comfortable for breathing.
Call a poison center/doctor.

Ingestion

Call a poison center/doctor if you feel unwell.
Rinse mouth.

Eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Skin

Wash with plenty of water.
Take off immediately all contaminated clothing and wash it before reuse.
If skin irritation occurs: Get medical advice/attention.

Environment

In case of fire: Use CO₂, powder or water spray to extinguish.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Name	CAS No.	Content (w/w)	Classification
2-Butoxy Ethanol	111-76-2		

4. FIRST AID MEASURES**Ingestion**

Immediately call a doctor.

Inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

Skin Contact

Immediately wash with water and soap and rinse thoroughly.

Eye Contact

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

Other Information

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

5. FIREFIGHTING MEASURES**Suitable extinguishing equipment****Fire**

CO₂, extinguishing powder or water spray.

Large Fire

Fight larger fires with water spray or alcohol resistant foam.

HAZCHEM

No further relevant information available.

Special protective equipment and precautions for fire fighters

Mouth respiratory protective device.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Not required.

Environmental precautions

Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.

Methods and materials for containment and clean up

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.

7. HANDLING AND STORAGE**Precautions for safe handling**

Precautions for safe handling Ensure good ventilation/exhaustion at the workplace.
Information about protection against explosions and fires: No special measures required.

Conditions for safe storage**Storage:**

Requirements to be met by storerooms and receptacles: No special requirements.
 Information about storage in one common storage facility: Not required.
 Further information about storage conditions: Keep receptacle tightly sealed.
 Specific end use(s) No further relevant information available.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Exposure Standards**

Material	TWA ppm	TWA mg/m ³	STEL ppm	STEL mg/m ³
111-76-2 2-Butoxy Ethanol	50 ppm	240 mg/m ³	5 ppm	24 mg/m ³

Engineering controls

No further data; see section 7.
 General protective and hygienic measures:
 Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing.
 Wash hands before breaks and at the end of work.
 Avoid contact with the eyes and skin.

Personal protective equipment**Eye and face protection**

Tightly sealed goggles.
 General protective and hygienic measures:
 Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing.
 Wash hands before breaks and at the end of work.
 Avoid contact with the eyes and skin.

Skin protection

Protective gloves
 The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
 Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
 Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
 Material of gloves
 The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
 Penetration time of glove material
 The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Respiratory protection

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

9. PHYSICAL AND CHEMICAL PROPERTIES**General information****Appearance**

Colourless liquid

Odour

Characteristic

pH

7

Vapour Pressure

Not determined.

Density

0.9 g/cm³ (7.5105 lbs/gal) at 20 °C (68 °F)

Boiling Point

173.5 °C (344.3 °F)

Melting Point

-75 °C (-103 °F)

Solubility

with water at 20 °C (68 °F): 1 g/l

Specific Gravity of Density

Not determined.

Flash Point

67 °C (152.6 °F)

Flammable (Explosive) Limits

Lower: 1.1 Vol %
 Upper: 12.7 Vol %

Ignition Temperature

Not determined.

Formula

C₆H₁₄O₂ Structural formula: CH₃CH₂CH₂CH₂-O-CH₂CH₂-OH CAS: 111-76-2
 Molecular weight: 118.17 g/mol Chemical class: Glycol ether

10. STABILITY AND REACTIVITY

Reactivity	No further relevant information available.
Chemical stability	Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Possibility of hazardous reactions	No dangerous reactions known.
Conditions to avoid	No further relevant information available.
Incompatible materials	Incompatible materials: No further relevant information available. Hazardous decomposition products: No dangerous decomposition products known.

11. TOXICOLOGICAL INFORMATION

Acute effects	LD/LC50 values that are relevant for classification: Oral LD50 1,200 mg/kg (ATE) 1,480 mg/kg (rat) Dermal LD50 400 mg/kg (rab) Inhalative LC50/4 h 3 mg/l (ATE)
Eye contact	Irritating effect
Skin contact	Irritant to skin and mucous membranes
Toxicity and irritation	Carcinogenic categories IARC (International Agency for Research on Cancer) 3 NTP (National Toxicology Program) Substance is not listed. OSHA-Ca (Occupational Safety Health Administration) Substance is not listed. Alternative sources for toxicological information No non-standard sources for toxicological information where used.

12. ECOLOGICAL INFORMATION

Ecotoxicity	No further relevant information available.
Persistence and degradability	No further relevant information available.
Bioaccumulative potential	No further relevant information available.
Other adverse effects	General notes: Water hazard class 1 (Assessment by list): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13. DISPOSAL CONSIDERATIONS**General information**

Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agent: Water, if necessary with cleansing agents.

14. TRANSPORT INFORMATION

ADG label required	
Class 3 Flammable liquid	
HAZCHEM	No further relevant information available.
UN Number	DOT, ADR UN1993,
Proper shipping name	DOT Flammable liquids, n.o.s. (2-Butoxy Ethanol) ADR 1993 FLAMMABLE LIQUID, N.O.S. (2-Butoxy Ethanol) IMDG, IATA Void
Transport hazard class	Class 3 Flammable liquids Label 3
Packing group	Void
Environmental hazard	Not applicable

Additional information

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.
 Transport/Additional information:
 DOT
 Quantity limitations On passenger aircraft/rail: 1 L
 On cargo aircraft only: 30 L
 ADR
 Excepted quantities (EQ) Code: E3
 Maximum net quantity per inner packaging: 30 mL
 Maximum net quantity per outer packaging: 300 mL
 Special precautions for user Warning: Flammable liquids
 Poison inhalation hazard: No
 Hazard identification number (Kemler code): 30

15. REGULATORY INFORMATION**Poisons Schedule Number**

Safety, health and environmental regulations/legislation specific for the substance or mixture:

No further relevant information available.

Other Information

Sara

- Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is listed.
- TSCA (Toxic Substances Control Act): ACTIVE
- Hazardous Air Pollutants Substance is not listed.
- Proposition 65
- Chemicals known to cause cancer: Substance is not listed.
- Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- Chemicals known to cause developmental toxicity: Substance is not listed.
- Carcinogenic categories
- EPA (Environmental Protection Agency) NL
- TLV (Threshold Limit Value) A3
- NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).

16. OTHER INFORMATION**SDS preparation date**

15 September 2026

Comments

Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route
(European Agreement Concerning the International

Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flammable liquids 4: Flammable liquids – Category 4

Acute toxicity - oral 4: Acute toxicity – Category 4

Acute toxicity - dermal 3: Acute toxicity – Category 3

Skin irritation 2: Skin corrosion/irritation – Category 2

Eye irritation 2A: Serious eye damage/eye irritation – Category 2A

References

Electron Microscopy Science SDS " 2-Butoxy Ethanol". 04/05/2023
<https://www.emsdiasum.com/docs/technical/msds/11820.pdf>

This Safety Data Sheet (SDS) has been prepared in compliance with the Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice February 2016. It is the user's responsibility to determine the suitability of this information for adoption of necessary safety precautions. The information published in this SDS has been compiled from the publications listed in Section 16: to the best of our ability and knowledge these publications are considered accurate. We reserve the right to revise Safety Data Sheets as new information becomes available. Copies may be made for non-profit use.

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