1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:	**Industrial Solvent**
Other Identifier:	2-Butoxyethanol, Glycol Ether
Recommended Use:	Solvent
Supplier: **ABN:**	Big Bubble 51 290 656 636
Street Address:	18 Elliott Street Midvale Western Australia
Telephone Number:	+61 08 9274 1992
Poisons Information Centre:	**131 126 Australia**

2. HAZARDS IDENTIFICATION

Road and Rail; Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.

Globally Harmonised System

Hazard Classification
Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Hazard Categories	Skin Corrosion / Irritation – Category 2 Serious Eye Damage / Irritation – Category 2A Specific Target Organ Toxicity (Single Exposure) – Category 3 Flammable Liquids – Category 4 Acute Toxicity (Oral) – Category 4 Acute Toxicity (Dermal) – Category 4 Acute Toxicity (Inhalation) – Category 4

Pictogram

Name of pictogram	Exclamation mark

Signal Word	Warning
Hazard Statements	**H227** Combustible liquid. **H302 + H312 + H332** Harmful if swallowed, in contact with skin or if inhaled. **H315** Causes skin irritation. **H319** Causes serious eye irritation. **H335** May cause respiratory irritation.
Precautionary Statement	
Prevention	**P210** Keep away from flames and hot surfaces. No smoking. **P233** Keep container tightly closed. **P261** Avoid breathing mist/vapours/spray. **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/eye protection/face protection.
Response	**P302 + P352** IF ON SKIN: Wash with plenty of soap and water. **P304 + P340** IF INHALED: Remove victim 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. **P312** Call a POISON CENTRE or doctor if you feel unwell. **P330** Rinse mouth. **P332 + P313** If skin irritation occurs: Get medical advice. **P337 + P313** If eye irritation persists: Get medical advice. **P362 + P364** Take off contaminated clothing and wash it before reuse. **P370 + P378** In case of fire: Use carbon dioxide (CO_2), dry chemical, regular foam extinguishing agent or water spray for extinction.
Storage	**P403 + P235** Store in a well-ventilated place. Keep cool. **P405** Store locked up.
Disposal	**P501** Dispose of contents/container in accordance with local / regional / national / international regulations.
Poisons Schedule:	Schedule 6

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion
2-Butoxyethanol	111-76-2	<= 100 %

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor at once.

Ingestion:	IF SWALLOWED: Rinse mouth, then give 1 cup of water. Do not induce vomiting. Immediately call a Poison Centre or doctor/physician for advice. Never give anything by mouth to an unconscious person.
Eye Contact:	IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention, preferably an ophthalmologist.
Skin Contact:	IF ON SKIN (or hair): Remove contaminated clothing and shoes immediately. Flush skin with running water for at least 15 minutes. Call a Poison Centre or doctor/physician for advice. Wash contaminated clothing and shoes before reuse.
Inhalation:	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a Poison Centre or doctor/physician for advice. Apply resuscitation if victim is not breathing – Administer oxygen if breathing is difficult.
Medical attention and special treatment:	Treat symptomatically. Ensure that attending medical personnel are aware of the identity and nature of the product(s) involved and take precautions to protect themselves. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. In cases where several ounces (60 – 100 mL) have been ingested, consider the use of ethanol and hemodialysis in the treatment. If ethanol is used, a therapeutically effective blood concentration in the range of 100 – 150 mg/dl may be achieved by a rapid loading dose followed by continuous intravenous infusion. 4-Methyl pyrazole (Antizol®) is an effective blocker of alcohol dehydrogenase and should be used in the treatment of ethylene glycol butyl ether (EGBE) or methanol intoxication, if available. The signs and symptoms of poisoning include anion gap metabolic acidosis, CNS depression, renal tubular injury, and possible late-stage cranial nerve involvement. Respiratory symptoms including pulmonary oedema may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. Maintain adequate ventilation and oxygenation of the patient. In severe poisoning, respiratory support with mechanical ventilation and positive end expiratory pressure may be required. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach.

5. FIRE FIGHTING MEASURES

General	Keep people away. Isolate fire and deny unnecessary entry. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. If safe to do so, move undamaged containers from fire area. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Burning liquids may be moved by flushing with water to protect personnel and minimise property damage.

Flammability Conditions	Combustible liquid; May burn but does not readily ignite.
Suitable Extinguishing Media:	Use dry chemical, Carbon dioxide (CO_2), foam or water spray for extinction. Burning liquids may be extinguished by dilution with water – Do not use direct water stream. May spread fire.
Fire and Explosion Hazards	Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.
Hazardous combustion products:	During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include Carbon oxides.
Precautions for fire fighters and special protective equipment:	Contain runoff from fire control or dilution water – Runoff may pollute waterways. Wear self-contained breathing apparatus (SCBA) and chemical splash suit. SCBA and structural firefighter's uniform may provide limited protection.

Auto Ignition temperature:	230 – 245 ˚C
Decomposition Temperature:	No Data Available
Flammability:	No Data Available
Flash Point:	67 ˚C (Closed cup)

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Ensure adequate ventilation. ELIMINATE all ignition sources (no smoking, flares, sparks, or flames). Do not touch or walk through spilled material. Avoid breathing vapours and contact with eyes, skin, and clothing.
Protective equipment:	Use personal protective equipment as required (see SECTION 8).
Emergency procedures:	Spill or leak should be isolated immediately. Keep unnecessary and unprotected personnel from entering the area. Large spills: Dike area to contain spill.
Environmental Precautions:	Prevent from entering soil, ditches, sewers, waterways, and/or groundwater. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for Containment and clean up:	Stop leak if safe to do so – Prevent entry into waterways, drains, or confined areas. Absorb with earth, sand, or other non-combustible material and transfer to a suitable container for disposal (see SECTION 13). Use non-sparking tools. For large amounts: Pump off product. Wash away remainder with plenty of water.

7. HANDLING AND STORAGE

This material must be stored, maintained and used in accordance with the relevant regulations.

Conditions for safe storage:	Keep in the original container or store in the following material(s): Carbon steel, stainless steel, Phenolic lined steel drums. Do not store in aluminium, copper, galvanised iron, galvanised steel. Store in a cool, dry, well-ventilated place, out of direct sunlight. Keep container tightly closed. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources – No smoking. Keep away from foodstuffs and incompatible materials (see SECTION 10). Store locked up.
Precautions for safe handling:	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation – Use only outdoors or in a well-ventilated area. Handle in accordance with good industrial hygiene and safety practice. Avoid breathing mist/vapours/spray and contact with eyes, skin, and clothing. Do not ingest. Wear protective gloves/protective clothing/eye protection/face protection (see SECTION 8). Combustible liquid: Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources – No smoking. Ground and bond containers and receiving equipment. Electrical installations/working materials must comply with the technological safety standards.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure control measures:	For substance: 2-Butoxyethanol: Safe Work Australia Exposure Standard: TWA = 20 ppm (96.9 mg/m^3); STEL = 50 ppm (242 mg/m^3); Absorption through the skin may be a significant source of exposure (Sk).
Biological Monitoring	No information available.
Engineering Controls	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible.
Personal Protective Equipment	
Eye and Face	Wear appropriate eye protection to avoid eye contact. Recommended: Use chemical goggles. If exposure causes eye discomfort, use a full-face respiratory.
Skin	Wear protective gloves. Recommended: Use chemical resistant gloves, e.g. Butyl rubber, ethyl vinyl, alcohol laminate (EVAL). Wear appropriate personal protective clothing to avoid skin contact. Recommended: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory	Wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. Recommended: use an approved air-purifying respirator, organic vapour cartridge (refer to AS/NZS 1715 & 1716).

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Colour:	Colourless
Odour:	Mild, Ether-like
pH:	No data available
Solubility:	>1,000 g/L in water 20˚C
Auto Ignition temperature:	230 – 245˚C
Decomposition Temperature:	No Data Available
Evaporation Rate:	No Data Available
Flammability:	No Data Available
Flash Point:	67˚C [Closed cup]
Boiling Point:	171˚C
Melting/Freezing Point:	-75˚C
Odour Threshold:	No Data Available
Partition coefficient: n-octanol/water	No Data Available
Relative Density:	No Data Available
Upper Flammibility Limit	No Data Available
Lower Flammability Limit:	No Data Available
Explosive limits:	No Data Available
Vapour density:	No Data Available
Vapour pressure;	No Data Available
Viscosity:	No Data Available
Biopersistence:	No Data Available
Crystallinity:	No Data Available
Dustiness:	No Data Available

Particle size:	No Data Available
Redox potential:	No Data Available
Release of invisible flammable vapours and gases	No Data Available
Saturated Vapour Concentration	No Data Available

10. STABILITY AND REACTIVITY

Chemical stability:	Thermally stable at typical use temperatures.
Conditions to avoid:	Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. Do not distil to dryness.
Incompatible materials:	Incompatible/reactive with strong acids, strong oxidisers, bases, amines, ammonia, acid chlorides.
Hazardous decomposition products:	Decomposition products depend upon temperature, air supply, and the presence of other materials. Decomposition products can include aldehydes, ketones, and organic acids.
Hazardous reactions or Polymerisation:	Polymerisation will not occur.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion:	Harmful if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Massive ingestion of ethylene glycol monobutyl ether (attempted suicides) may produce metabolic acidosis and subsequent secondary effects such as hemolysis, central nervous system, and kidney effects.
Eye contact:	Causes serious eye irritation. May cause moderate corneal injury. Effects may be slow to heal. Vapour may cause eye irritation experienced as mild discomfort and redness.
Skin contact:	Causes skin irritation. Brief contact may cause slight skin irritation with local redness. Repeated exposure may cause irritation, even a burn. May cause more severe response on covered skin (under clothing, gloves).
Inhalation:	Harmful if inhaled. May cause respiratory irritation. Excessive exposure may cause irritation to upper respiratory tract (nose and throat). In humans, symptoms may include headache. In animals, effects have been reported on the blood (hemolysis) and secondary effects on the kidney and liver.

Acute Toxicity:	Acute Toxicity (Oral): LD50, Rat: 1,300 mg/kg Acute Toxicity (Dermal): LD50, Guinea Pig: >2,000 mg/kg Acute Toxicity (Inhalation): LC50, Guinea Pig: >3.1 mg/L (1 h); No deaths occurred at this concentration.
Carcinogenity:	Not expected to be carcinogenic.
Mutagenicity:	Not expected to be mutagenic.
Reproductive:	In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 > 100 mg/L in the most sensitive species tested).
Persistence and degradability:	Material is readily biodegradable (90.4 %, 28 days) [OECD Test Guideline 301B or Equivalent)
Bioaccumulative potential:	Bioconcentration potential is low (BCF < 100 or Log Pow < 3): Log Pow = 0.81 BCF = 3.2
Mobility:	Potential for mobility in soil is high (Koc between 50 and 150): Koc = 67 (Estimated)

13. DISPOSAL CONSIDERATIONS

Disposal methods:	Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility. Or refilled at Big Bubble in Midvale.

14. TRANSPORT INFORMATION

Road and Rail Transport
Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.

Marine Transport
Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; NON-DANGEROUS GOODS.

Air Transport
Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; NON-DANGEROUS GOODS.

15. REGULATORY INFORMATION

Poisons Schedule: Schedule 6

16. OTHER INFORMATION

Revision date: 17/11/2024
Reason for issue: Update SDS
Key/Legend:
< Less Than
> Greater Than
AICS Australian Inventory of Chemical Substances
atm Atmosphere
CAS Chemical Abstracts Service (Registry Number)
cm2 Square Centimetres
CO2 Carbon Dioxide
COD Chemical Oxygen Demand
deg C (**°C**) Degrees Celcius
g Grams
g/cm3 Grams per Cubic Centimetre
g/l Grams per Litre
HSNO Hazardous Substance and New Organism
IDLH Immediately Dangerous to Life and Health
immiscible Liquids are insoluable in each other.
inHg Inch of Mercury
inH2O Inch of Water
K Kelvin
kg Kilogram
kg/m3 Kilograms per Cubic Metre
LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.
LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.
ltr or **L** Litre
m3 Cubic Metre
mbar Millibar
mg Milligram
mg/24H Milligrams per 24 Hours
mg/kg Milligrams per Kilogram
mg/m3 Milligrams per Cubic Metre
Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present.
mm Millimetre mmH2O Millimetres of Water
mPa.s Millipascals per Second
N/A Not Applicable
NIOSH National Institute for Occupational Safety and Health
NOHSC National Occupational Heath and Safety Commission

OECD Organisation for Economic Co-operation and Development
PEL Permissible Exposure Limit
Pa Pascal
ppb Parts per Billion
ppm Parts per Million
ppm/2h Parts per Million per 2 Hours
ppm/6h Parts per Million per 6 Hours
psi Pounds per Square Inch
R Rankine
RCP Reciprocal Calculation Procedure
STEL Short Term Exposure Limit
TLV Threshold Limit Value tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight

This material safety data sheet has been prepared by Midland Chemicals

This MSDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. No liability is accepted whether direct or indirect from its application since the conditions of final use are outside Midland Chemicals control. The end user is obliged to conform to relevant government regulations and/or patent laws applicable in their respective States of Countries.