



SAFTEY DATA SHEET

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1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product Identifier

Product Name ALUMINIUM CLEANER BRIGHTENER
Synonym(s) ALU1L, ALU5L, ALU10L, ALU20L, ALU200L, ALU1000L

1.2 Uses and uses advised against

Use(s) Metal Cleaner & Brightener

1.3 Details of the supplier of the product

Supplier Name Northern Chemicals Pty Ltd
Address 157 Hartley St, Cairns, QLD, 4870, Australia
Telephone (07) 4035 4622
Fax (07) 4035 4932
Email enquiries@northernchemicals.com.au
Website www.northernchemicals.com.au

1.4 Emergency telephone number(s)

Emergency (07) 4035 4622

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO AUSTRALIAN WHS REGULATIONS

GHS classification(s) Skin Corrosion/Irritation: Category 1B
Serious Eye Damage: Category 1
Acute Toxicity (Oral): Category 4
Acute Aquatic Hazard: Category 3
Chronic Aquatic Hazard: Category 3

2.2 Label elements

Signal Word DANGER

Pictogram(s)



Hazard statement(s)

H318 Causes serious eye damage.
H314 Causes severe skin burns and eye damage.
H302 Harmful if swallowed.
H412 Harmful to aquatic life with long lasting effects.

Prevention statement(s)

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.

Response statement(s)

P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
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 or doctor/physician.

Storage statement(s)

P405	Store locked up.
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Disposal statement(s)

P501	Take off contaminated clothing and wash before reuse.
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2.3 Other hazards

N/A

3. COMPOSITION / INFORMATION ON INGREDIENTS**3.1 Substances / Mixtures**

INGREDIENT	CAS NUMBER	CONTENT
WATER	7732-18-5	>60%
BUILDERS	-	<10%
PHOSPHORIC ACID	7664-38-2	30-60%
ETHYLENE GLYCOL MONOBUTYL ETHER	111-76-2	10-30%
SURFACTANTS	-	<10%

4. FIRST AID MEASURES**4.1 Description of first aid measures**

Eye	If this product comes in contact with the eyes: Immediately hold eyelids apart and flush the eye continuously with running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Inhalation	If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or
Skin	If skin or hair contact occurs: Immediately flush body and clothes with large amounts of water, using safety shower if available. Quickly remove all contaminated clothing, including footwear. Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre. Transport to hospital, or doctor.
Ingestion	For advice, contact a Poisons Information Centre or a doctor at once. Urgent hospital treatment is likely to be needed. If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Transport to hospital or doctor without delay.
First aid facilities	Eye wash facilities should be available.

4.2 Immediate medical attention and special treatment needed

Followed acute or short term repeated exposures to ethylene glycol monoalkyl ethers and their acetates: Hepatic metabolism produces ethylene glycol as a metabolite. Clinical presentation, following severe intoxication, resembles

that of ethylene glycol exposures. Monitoring the urinary excretion of the alkoxyacetic acid metabolites may be a useful indication of exposure.

For acute or short term repeated exposures to ethylene glycol: Early treatment of ingestion is important. Ensure emesis is satisfactory. Test and correct for metabolic acidosis and hypocalcaemia. Apply sustained diuresis when possible with hypertonic mannitol. Evaluate renal status and begin haemodialysis if indicated. [I.L.O]. Rapid absorption is an indication that emesis or lavage is effective only in the first few hours. Cathartics and charcoal are generally not effective. Correct acidosis, fluid/electrolyte balance and respiratory depression in the usual manner. Systemic acidosis (below 7.2) can be treated with intravenous sodium bicarbonate solution. Ethanol therapy prolongs the half-life of ethylene glycol and reduces the formation of toxic metabolites. Pyridoxine and thiamine are cofactors for ethylene glycol metabolism and should be given (50 to 100 mg respectively) intramuscularly, four times per day for 2 days. Magnesium is also a cofactor and should be replenished. The status of 4-methylpyrazole, in the treatment regime, is still uncertain. For clearance of the material and its metabolites, haemodialysis is much superior to peritoneal dialysis. For acute or short term repeated exposures to strong acids: Airway problems may arise from laryngeal edema and inhalation exposure. Treat with 100% oxygen initially. Respiratory distress may require cricothyroidotomy if endotracheal intubation is contraindicated by excessive swelling. Intravenous lines should be established immediately in all cases where there is evidence of circulatory compromise. Strong acids produce a coagulation necrosis characterised by formation of a coagulum (eschar) as a result of the desiccating action of the acid on proteins in specific tissues.

INGESTION: Immediate dilution (milk or water) within 30 minutes post ingestion is recommended. DO NOT attempt to neutralise the acid since exothermic reaction may extend the corrosive injury. Be careful to avoid further vomit since re-exposure of the mucosa to the acid is harmful. Limit fluids to one or two glasses in an adult. Charcoal has no place in acid management. Some authors suggest the use of lavage within 1 hour of ingestion.

SKIN: Skin lesions require copious saline irrigation. Treat chemical burns as thermal burns with non-adherent gauze and wrapping. Deep second-degree burns may benefit from topical silver sulfadiazine.

EYE: Eye injuries require retraction of the eyelids to ensure thorough irrigation of the conjunctival cul-de-sacs. Irrigation should last at least 20-30 minutes. DO NOT use neutralising agents or any other additives. Several litres of saline are required. Cycloplegic drops, (1% cyclopentolate for short-term use or 5% homatropine for longer term use) antibiotic drops, vasoconstrictive agents or artificial tears may be indicated dependent on the severity of the injury. Steroid eye

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Water spray or fog. Foam. Dry chemical powder. BCF (where regulations permit).

5.2 Special hazards arising from the substance or mixture

Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

5.3 Advice for firefighters

Alert Fire Brigade and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Use water delivered as a fine spray to control fire and cool adjacent area.

5.4 Hazchem code

N/A

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

See section 8

6.2 Environmental precautions

See section 12

6.3 Methods of cleaning up

Minor Spills

Environmental hazard - contain spillage. Remove all ignition sources. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment.

Major Spills

Environmental hazard - contain spillage. Moderate hazard. Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves.

6.4 Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the SDS.

7. HANDLING AND STORAGE**7.1 Precautions for safe handling**

Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps. DO NOT allow clothing wet with material to stay in contact with skin

7.2 Conditions for safe storage, including any incompatibilities**Suitable Container**

Polyethylene or polypropylene container. Packing as recommended by manufacturer (HDPE). Check all containers are clearly labelled and free from leaks.

Storage Incompatibilities

Ethylene glycol monobutyl ether (2-butoxyethanol) and its acetate: May form unstable peroxides in storage is incompatible with oxidisers, permanganates, peroxides, ammonium persulfate, bromine dioxide, nitrates, strong acids, sulfuric acid, nitric acid, perchloric acid

Phosphoric acid: Is a medium-strong acid which produces violent reaction with bases. May produce violent reaction when water is added to the concentrated form. Reacts violently with solutions containing ammonia or bleach, azo compounds, epoxides and other polymerisable compounds. Reacts, possibly violently with amines, aldehydes, alkanolamines, alcohols, alkylene oxides, amides, ammonia, ammonia hydroxide, calcium oxide, cyanides, epichlorohydrin, esters, halogenated organics, isocyanates, ketones, oleum, organic anhydrides, sodium tetraborate, sulfides, sulfuric acid, strong oxidisers, vinyl acetate. Forms explosive mixtures with nitromethane. At elevated temperatures attacks many metals producing hydrogen gas. At room temperature does not attack stainless steel, copper or its alloys. Attacks glass, ceramics, and some plastics, rubber and coatings. Inorganic acids are generally soluble in water with the release of hydrogen ions. The resulting solutions have pH's of less than 7.0. Inorganic acids neutralise chemical bases (for example: amines and inorganic hydroxides) to form salts - neutralisation can generate dangerously large amounts of heat in small spaces. The dissolution of inorganic acids in water or the dilution of their concentrated solutions with additional water may generate significant heat. The addition of water to inorganic acids often generates sufficient heat in the small region of mixing to cause some of the water to boil explosively. The resulting "bumping" can spatter the acid. Inorganic acids react with active metals, including such structural metals as aluminium and iron, to release hydrogen, a flammable gas. Inorganic acids can initiate the polymerisation of certain classes of organic compounds. Inorganic acids react with cyanide compounds to release gaseous hydrogen cyanide. Inorganic acids generate flammable and/or toxic gases in contact with dithiocarbamates, isocyanates, mercaptans, nitrides, nitriles, sulfides, and strong reducing agents. Additional gas-generating reactions occur with sulfites, nitrites, thiosulfates (to give H₂S and SO₃), dithionites (SO₂), and even carbonates. Acids often catalyse (increase the rate of) chemical reactions. Reacts vigorously with alkalis. Reacts with mild steel, galvanised steel / zinc producing hydrogen gas which may form an explosive mixture with air. Phosphates are incompatible with oxidising and reducing agents. Phosphates are susceptible to formation of highly toxic and flammable phosphine gas in the presence of strong reducing agents such as hydrides. Partial oxidation of phosphates by oxidizing agents may result in the release of

7.3 Specific end use(s)

N/A

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**8.1 Control parameters****OCCUPATIONAL EXPOSURE LIMITS (OEL)****Ingredient Data**

Source	Ingredient	TWA	STEL	Peak	Notes
SWA (AUS)	phosphoric acid	1 mg/m ³	3 mg/m ³	N/A	N/A
SWA (AUS)	ethylene glycol monobutyl ether	96.9 mg/m ³ / 20 ppm	242 mg/m ³ / 50 ppm	2 mg/m ³	Sk

Emergency Limits

Ingredient	Material Name	TEEL-1	TEEL-2	TEEL-3
phosphoric acid	phosphoric acid	N/A	N/A	N/A
ethylene glycol monobutyl ether	Butoxyethanol, 2-; (Glycol ether EB)	60 ppm	120 ppm	700 ppm

Ingredient	Original IDLH	Revised IDLH
phosphoric acid	10,000 mg/m3	1,000 mg/m3
ethylene glycol monobutyl ether	700 ppm	700 [Unch] ppm

8.2 Exposure controls

Engineering Controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee

Personal Protective Equipment



Eye / Face

Chemical goggles. Full face shield may be required for supplementary but never for primary protection of eyes. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.

Hands / Feet

Wear chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Personal hygiene is a key element of effective hand care.

Body

Overalls. P.V.C. apron. Barrier cream.

Respiratory

See Above

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Clear Orange Liquid	Relative density	1.2 -1.3
Physical state	Liquid	Partition coefficient	N/A
Odour	N/A	Auto-ignition temperature	N/A
pH	1-2	Decomposition temperature	N/A
Melting point	N/A	Viscosity	N/A
Boiling point	N/A	Molecular weight	N/A
Flash point	N/A	Taste	N/A
Evaporation rate	N/A	Explosive properties	N/A
Flammability	N/A	Oxidising properties	N/A
Upper Explosive Limit	N/A	Surface Tension	N/A

Lower Explosive Limit	N/A
Vapour pressure	N/A
Solubility in water	N/A
Vapour density	N/A

Volatile Component	N/A
Gas group	N/A

10. STABILITY AND REACTIVITY

10.1 Reactivity

See section 7

10.2 Chemical stability

Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur

10.3 Possibility of hazardous reactions

See section 7

10.4 Conditions to avoid

See section 7

10.5 Incompatible materials

See section 7

10.6 Hazardous decomposition products

See section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Inhaled

The material is not thought to produce adverse health effects following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. Corrosive acids can cause irritation of the respiratory tract, with coughing, choking and mucous membrane damage. There may be dizziness, headache, nausea and weakness. Inhalation of the vapour may cause choking, coughing, headache, weakness and dizziness, and with long term exposure, fluid accumulation in the lungs and blueness, initially in the fingertips. Ethylene glycol monobutyl ether can destroy the blood cells with long term exposure. It also causes eye, nose and throat discomfort. Higher doses can cause blood in the urine.

Ingestion

Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual. The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion. Ingestion of acidic corrosives may produce burns around and in the mouth, the throat and oesophagus. Immediate pain and difficulties in swallowing and speaking may also be evident. As absorption of phosphates from the bowel is poor, poisoning this way is less likely. Effects can include vomiting, tiredness, fever, diarrhoea, low blood pressure, slow pulse, cyanosis, spasms of the wrist, coma and severe body spasms. Ingestion of large quantity of phosphoric acid may cause severe abdominal pains, thirst, acidaemia, difficult breathing, convulsions, collapse, shock and death. Although less hazardous than nitric and sulfuric acid, phosphoric acid has equal corrosive action upon ingestion. Death of an individual 19 days after ingestion of phosphoric acid was due to recurrent internal haemorrhage. Necrosis of the upper and lower digestive tract and pancreas was evident at autopsy. Severe acute exposure to ethylene glycol monobutyl ether, by ingestion, may cause kidney damage, haemoglobinuria, (blood in urine) and is potentially fatal.

Skin Contact

The material can produce chemical burns following direct contact with the skin. Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. Skin contact with acidic corrosives may result in pain and burns; these may be deep with distinct edges and may heal slowly with the formation of scar tissue. Ethylene glycol monobutyl ether penetrates the skin easily and will cause more harm on skin contact than through inhalation. Open cuts, abraded or irritated skin should not be exposed to this

material. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

Eye

The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating. If applied to the eyes, this material causes severe eye damage. Direct eye contact with acid corrosives may produce pain, tears, sensitivity to light and burns. Mild burns of the epithelia generally recover rapidly and completely. Ethylene glycol monobutyl ether may cause pain, redness and damage to the eyes.

Chronic

Repeated or prolonged exposure to acids may result in the erosion of teeth, swelling and/or ulceration of mouth lining. Irritation of airways to lung, with cough, and inflammation of lung tissue often occurs. There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment.

ALUMINIUM CLEANER BRIGHTENER	TOXICITY	IRRITATION
	N/A	N/A

Phosphoric Acid	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >1260 mg/kg	Eye (rabbit): 119 mg - SEVERE
	Inhalation (rat) LC50: 0.0255 mg/L/4hr	Skin (rabbit):595 mg/24h - SEVERE
	Oral (rat) LD50: 1.7 ml	

Ethylene Glycol Monobutyl Ether	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg	Eye (rabbit): 100 mg SEVERE
	Inhalation (rat) LC50: 450 ppm/4hr	Eye (rabbit): 100 mg/24h-moderate
	Oral (rat) LD50: 250 mg/kg	Skin (rabbit): 500 mg, open; mild

Ethylene Glycol Monobutyl Ether	
<p>The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.</p> <p>For ethylene glycol monoalkyl ethers and their acetates (EGMAEs): Typical members of this category are ethylene glycol propylene ether (EGPE), ethylene glycol butyl ether (EGBE) and ethylene glycol hexyl ether (EGHE) and their acetates. EGMAEs are substrates for alcohol dehydrogenase isozyme ADH-3, which catalyses the conversion of their terminal alcohols to aldehydes (which are transient metabolites). Further, rapid conversion of the aldehydes by aldehyde dehydrogenase produces alkoxyacetic acids, which are the predominant urinary metabolites of mono substituted glycol ethers.</p> <p>Acute Toxicity: Oral LD50 values in rats for all category members range from 739 (EGHE) to 3089 mg/kg bw (EGPE), with values increasing with decreasing</p> <p>Exposure of pregnant rats to ethylene glycol monobutyl ether (2-butoxyethanol) at 100 ppm or rabbits at 200 ppm during organogenesis resulted in maternal toxicity and embryotoxicity including a decreased number of viable implantations per litter. Slight foetotoxicity in the form of poorly ossified or unossified skeletal elements was also apparent in rats. Teratogenic effects were not observed in other species. At least one researcher has stated that the reproductive effects were less than that of other monoalkyl ethers of ethylene glycol.</p> <p>For ethylene glycol: Ethylene glycol is quickly and extensively absorbed through the gastrointestinal tract. Limited information suggests that it is also absorbed through the respiratory tract; dermal absorption is apparently slow. Following absorption, ethylene glycol is distributed throughout the body according to total body water. In most mammalian species, including humans, ethylene glycol is initially metabolised by alcohol. NOTE: Changes in kidney, liver, spleen and lungs are observed in animals exposed to high concentrations of this substance by all routes. **</p> <p>ASCC (NZ) SDS</p>	

PHOSPHORIC ACID
<p>for acid mists, aerosols, vapours. Data from assays for genotoxic activity in vitro suggest that eukaryotic cells are susceptible to genetic damage when the pH falls to about 6.5. Cells from the respiratory tract have not been examined in this respect. Mucous secretion may protect the cells of the airways from direct exposure to inhaled acidic mists, just as mucous plays an important role in protecting the gastric epithelium from its auto-secreted hydrochloric acid. In considering whether pH itself induces genotoxic events in vivo in the respiratory system, comparison should be made with the human stomach, in which gastric juice may be at pH 1-2 under fasting or nocturnal conditions, and with the human urinary bladder, in which the pH of urine can range from <5 to > 7 and normally averages 6.2. The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to</p>

Irritants may produce conjunctivitis. The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration. phosphoric acid (85%)

Acute Toxicity	YES	Carcinogenicity	NO
Skin Irritation/Corrosion	YES	Reproductivity	NO
Serious Eye Damage/Irritation	YES	STOT - Single Exposure	NO
Respiratory or Skin sensitisation	NO	STOT - Repeated Exposure	NO
Mutagenicity	NO	Aspiration Hazard	NO

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
phosphoric acid	LC50	96	Fish	75.1mg/L	
phosphoric acid	EC50	48	Crustacea	>376mg/L	
phosphoric acid	EC50	72	Algae or other aquatic plants	77.9mg/L	
phosphoric acid	EC50	24	Crustacea	>376mg/L	
phosphoric acid	NOEC	72	Algae or other aquatic plants	<7.5mg/L	
Ethylene glycol monobutyl ether	LC50	96	Fish	222.042mg/L	
Ethylene glycol monobutyl ether	EC50	48	Crustacea	>1000mg/L	
Ethylene glycol monobutyl ether	EC50	96	Algae or other aquatic plants	1081.644mg/L	
Ethylene glycol monobutyl ether	EC50	384	Crustacea	51.539mg/L	
Ethylene glycol monobutyl ether	NOEC	96	Crustacea	1000mg/L	

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark.

Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

DO NOT discharge into sewer or waterways.

12.2 Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
ethylene glycol monobutyl ether	LOW (Half-life = 56 days)	LOW (Half-life = 1.37 days)
phosphoric acid	HIGH	HIGH

12.3 Bioaccumulative potential

Ingredient	Bioaccumulation
ethylene glycol monobutyl ether	LOW (BCF = 2.51)
phosphoric acid	LOW (LogKOW = -0.7699)

12.4 Mobility in soil

Ingredient	Mobility
ethylene glycol monobutyl ether	HIGH (KOC = 1)
phosphoric acid	HIGH (KOC = 1)

12.5 Other adverse effects

N/A

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product / Packaging disposal

Containers may still present a chemical hazard/ danger when empty.

Return to supplier for reuse/ recycling if possible.

Otherwise: If container cannot be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. Where possible retain label warnings and SDS and observe all notices pertaining to the Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate: Reduction, Reuse, Recycling, Disposal (if all else fails).

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type.

Note that properties of a material may change in use, and recycling or reuse may not always be appropriate. **DO NOT allow wash water from cleaning or process equipment to enter drains.** It may be necessary to collect all wash water for treatment before disposal. In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. Where in doubt contact the responsible authority. Recycle wherever possible. Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified. Dispose of by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or incineration in a licenced apparatus (after admixture with suitable combustible material). Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

14. TRANSPORT INFORMATION

Labels Required



	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
14.1 UN Number	1760	1760	1760
14.2 Proper Shipping Name	Corrosive liquids, n.o.s.	Corrosive liquids, n.o.s.	Corrosive liquids, n.o.s.
14.3 Transport hazard class	8	8	8
14.4 Packing Group	III	III	III
14.5 Subsidiary risk(s)	None Allocated	None Allocated	None Allocated
14.6 Environmental Hazard	Not Applicable	Not Applicable	Not Applicable
14.7 Hazchem Code	2X	2X	2X

14.8 Transport in bulk according to Annex II of MARPOL and the IBC code

N/A

15. REGULATORY INFORMATION

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

PHOSPHORIC ACID(7664-38-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards	Australia Inventory of Chemical Substances (AICS)
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ETHYLENE GLYCOL MONOBUTYL ETHER(111-76-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards	Australia Inventory of Chemical Substances (AICS)
Australia Hazardous Substances Information System - Consolidated Lists	International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

16. OTHER INFORMATION

Ingredient with multiple CAS numbers

Name	CAS No.
phosphoric acid	7664-38-2, 16271-20-8

Definitions and abbreviations

PC – TWA: Permissible Concentration-Time Weighted Average
PC – STEL: Permissible Concentration-Short Term Exposure Limit
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists
STEL: Short Term Exposure Limit
TEEL: Temporary Emergency Exposure Limit,
IDLH: Immediately Dangerous to Life or Health Concentrations
OSF: Odour Safety Factor
NOAEL :No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: BioConcentration Factors
BEI: Biological Exposure Index