

Ingredients:

Chemical Name	CAS Number:	Proportion:
Alkaline salts	Not avail.	4
Sodium hydroxide	1310-73-2	3.3
Ethylene glycol mono alkyl ether, typically		
Ethylene glycol monobutyl ether	111-76-2	2
Water	7732-18-5	>60

HEALTH HAZARD INFORMATION

Health Effects:

Acute

Swallowed: The liquid is corrosive and harmful if swallowed. Considered an unlikely route of entry in commercial/industrial environments. Ingestion may result in burns to the mouth, throat and stomach, pain, nausea and vomiting, swelling of the larynx and subsequent suffocation, perforation of the gastro-intestinal tract.

Eye: The liquid is corrosive to the eyes and is capable of causing severe burns.

Skin: The liquid is corrosive to the skin and is capable of causing burns. Toxic effects may result from skin absorption. Burns are not immediately painful; onset of pain may be delayed minutes or hours; thus care should be taken to avoid contamination of gloves and boots.

Inhaled: Not normally a hazard due to non-volatile nature of product. The mist is highly discomforting to the upper respiratory tract.

Chronic

Primary route of exposure is usually by skin contact. Repeated or prolonged skin contact can cause chronic dermatitis. As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.

First Aid

Advice For advise, contact a Poisons Information Centre (Phone eg. Australia 13 11 26; New Zealand 03 4747 000 [Not after May 2005] or 0800 764 766 or a doctor at once).

Swallowed If swallowed, do NOT induce vomiting.

Eyes If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.

Skin If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.

Safety Points

Wear eye protection when mixing or using.
Wear protective gloves when mixing or using
Do not mix with hot water

Advice to Doctor:

For acute or short-term repeated exposures to highly alkaline materials:

1. Respiratory stress is uncommon but presents occasionally because of soft tissue edema.
2. Unless endotracheal intubation can be accomplished under direct vision, cricothyroidotomy or tracheotomy may be necessary.
3. Oxygen is given as indicated.
4. The presence of shock suggests perforation and mandates an intravenous line and fluid administration.
5. Alkali corrosives damage occurs by liquefaction necrosis whereby the saponification of fats and solubilisation of proteins allow deep penetration into the tissue. Alkalis continue to cause damage after exposure.

Ingestion:

1. Milk and water are the preferred diluents No more than 2 glasses of water should be given to an adult.
2. Neutralising agents should never be given since exothermic heat reaction may compound injury.
 - * Catharsis and emesis are absolutely contra-indicated.
 - * Activated charcoal does not absorb alkali.
 - * Gastric lavage should not be used.

Supportive care involves the following:

1. Withhold oral feedings initially.
2. If endoscopy confirms transmucosal injury start steroids only within the first 48 hours.
3. Carefully evaluate the amount of tissue necrosis before assessing the need for surgical intervention.
4. Patients should be instructed to seek medical attention whenever they develop difficulty in swallowing (dysphagia).

Skin And Eye:

1. Injury should be irrigated for 20-30 minutes.
Eye injuries require saline. [Ellenhorn & Barceloux: Medical Toxicology].

PRECAUTIONS FOR USE

Exposure Standards:	None assigned. Refer to individual constituents.
<alkaline salts>	No exposure limits set by NOHSC or ACGIH Dusts not otherwise classified, as inspirable dust; ES TWA: 10 mg/m ³ .
<sodium hydroxide>	TLV C: 2 mg/m ³ ES Peak: 2 mg/m ³ IDLH Level: 250 mg/m ³ The TLV-C is recommended based on concentrations that produce noticeable but not excessive, ocular and upper respiratory tract irritation.
<ethylene glycol monobutyl ether>	TLV TWA: 25 ppm, 121 mg/m ³ (skin) NOTICE OF INTENDED CHANGE TLV TWA 20 ppm, 97 mg/m ³ (skin) ES TWA: 25 ppm, 121 mg/m ³ (skin) Under review

Exposure limits with "skin" notation indicate that vapour and liquid may be absorbed through intact skin. Absorption by skin may readily exceed vapour inhalation exposure. Symptoms for skin absorption are the same as for inhalation. Contact with eyes and mucous membranes may also contribute to overall exposure and may also invalidate the exposure standard.

MAK value: 20 ppm, 100 mg/m³

Designated H in List of MAK values: Danger of cutaneous absorption.

Absorption of such substances through the skin can pose an incomparably larger danger of toxicity than their inhalation. To avoid health risks when handling such substances, meticulous cleaning of the skin, hair and clothing is imperative.

MAK Category II Peak Limitation: For substances with systemic effects and with a half-life in humans of less than two hours. Allows excursions of 2 times the MAK value, for 30 minutes (on average), four times per shift.

MAK Group C

There is no reason to fear risk of damage to the developing embryo when MAK and BAT values are observed. MAK values, and categories and groups are those recommended within the Federal Republic of Germany. Odour Threshold Value: 0.10 ppm (detection), 0.35 ppm (recognition) IDLH Level: 700 ppm. Although rats appear to be more susceptible than other animals anaemia is not uncommon amongst humans following exposure. The TLV reflects the need to maintain exposures below levels found to cause blood changes in experimental animals. It is concluded that this limit will reduce the significant risk of irritation, haematologic effects and other systemic effects observed in humans and animals exposed to higher vapour concentrations. The toxic effects typical of some other glycol ethers (pancytopenia, testis atrophy and teratogenic effects) are not found with this substance.

Reproductive Health Guidelines

Established occupational exposure limits frequently do not take into consideration reproductive end points that are clearly below the thresholds for other toxic effects. Occupational reproductive guidelines (ORGs) have been suggested as an additional standard. These have been established after a literature search for reproductive no-observed-adverse effect-level (NOAEL) and the lowest-observed-adverse-effect-level (LOAEL). In addition the US EPA's procedures for risk assessment for hazard identification and dose-response assessment as applied by NIOSH were used in the creation of such limits. Uncertainty factors (UFs) have also been incorporated.

ORG	UF	Endpoint	CR	TLV Adequate.
<ethylene glycol monobutyl ether> 3.6 mg/m ³	100	D	NA	-

These exposure guidelines have been derived from a screening level of risk assessment and should not be construed as unequivocally safe limits. ORGS represent an 8-hour time-weighted average unless specified otherwise. CR = Cancer Risk/10000; UF = Uncertainty factor: TLV believed to be adequate to protect reproductive health:

LOD: Limit of detection

Toxic endpoints have also been identified as:

D = Developmental; R = Reproductive; TC = Transplacental carcinogen

Reference

Jankovic J., Drake F.: A Screening Method for Occupational Reproductive Health Risk:
American Industrial Hygiene Association Journal 57: 641-649 (1996).

Engineering Controls: General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas.

Personal Protection: Eyes - Full face shield. Chemical goggles. Contact lenses pose a special hazard; soft lenses may absorb irritants and all lenses concentrate them.
 Hands and Feet - Wear chemical protective gloves, eg. PVC. Wear safety gumboots, eg. Rubber.
 Other - Overalls. Barrier cream. Eyewash unit.
 Respirator - Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Breathing Zone Level ppm (volume)	Maximum Protection Factor	Half-face Respirator	Full-Face Respirator
1000	10	A -AUS P-	-
1000	50	-	A -AUS P-
5000	50	Airline *	-
5000	100	-	A -2 P-
10000	100	-	A -3 P-
	100+	-	Airline **

* - Continuous Flow ** - Continuous-flow or positive pressure demand.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information, consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

Flammability: 0

SAFE HANDLING INFORMATION

Storage and Transport: Suitable Container - DO NOT use aluminium, galvanised or tin-plated containers. Plastic carboy. Plastic container. Plastic drum. Mild steel can. Check that containers are clearly labelled. Packaging as recommended by manufacturer.

Storage Incompatibility - Avoid storage with acids, ammonium salts, strong oxidisers and organic compounds.

Storage Requirement - Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storing and handling recommendations.

Transportation - Class 8 - Corrosives shall not be loaded in the same vehicle or packed in the same freight container with:

- Class 1 - Explosives;
- Class 4.3 - Dangerous when wet substances;
- Class 5.1 - Oxidising agents;
- Class 5.2 - Organic peroxides;
- Class 7 - Radioactive substances;
- Class 8 - Acids only;

Foodstuff and foodstuff empties.

Spills and Disposal:

Minor Spills - Slippery when spilt. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact by using protective equipment. Contain and absorb spill with sand, earth, inert material or vermiculite. Wipe up. Place in a suitable labelled container for waste disposal.

Major Spills - Slippery when spilt. Clear area of personnel and move upwind. 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. Stop leak if safe to do so. Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled containers for recycling. Neutralise/decontaminate residue. Collect solid residues and seal in labelled drums for disposal. Wash area and prevent runoff into drains. After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using. If contamination of drains or waterways occurs, advise emergency services.

Disposal - Recycle wherever possible or consult manufacturer for recycling options. Consult State Land Waste Management Authority for disposal. Treat and neutralise with dilute acid at an effluent treatment plant. Recycle containers, otherwise dispose of in an authorised landfill.

Fire/Explosion Hazard:

Non combustible. Not considered to be a significant fire risk. Expansion or decomposition on heating may lead to violent rupture of containers. Decomposes on heating and may produce toxic fumes of carbon monoxide (CO). May emit acrid smoke. Reacts with aluminium / zinc producing flammable, explosive hydrogen gas.

OTHER INFORMATION

Toxicity	1
Body Contact	3
Reactivity	0
SCALE: Min/Nil=0 Low=1 Moderate=2 High=3 Extreme=4	
CAS RN No(s)	None
Subsidiary Risk	None

CONTACT POINT

ORGANISATION	TELEPHONE	ASK FOR
Poisons Information Centre – Australia Wide	131126	
Eazygleam Products Pty Ltd	+61-(0)7-3274 2593	Andrew Gilbert
Fire Brigade	000	Fire Brigade
Police	000	Police

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