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## 1. Product and Company Identification

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<b>Product Name</b>	<b>Glass Cleaner Concentrate</b>
<b>CAS #</b>	Mixture
<b>Product Use</b>	Glass Cleaner
<b>Manufacturer</b>	W.E. Greer Ltd. 14704 - 119 Avenue Edmonton, AB T5L 2P1 CA Phone (780) 451-1516 Fax (780) 451-0334
<b>CANUTEC</b>	1-613-996-6666

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## 2. Hazards Identification

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<b>Emergency Overview</b>	DANGER Toxic. MAY CAUSE SKIN IRRITATION. MAY CAUSE EYE IRRITATION. MAY CAUSE RESPIRATORY TRACT IRRITATION.
<b>Potential short term health effects</b>	
<b>Routes of exposure</b>	Eye, Skin contact, Skin absorption, Inhalation, Ingestion.
<b>Eyes</b>	May cause irritation.
<b>Skin</b>	May cause irritation. This product may be harmful if it is absorbed through the skin.
<b>NIOSH - Pocket Guide - Skin Notations</b>	
Ethylene glycol monobutyl ether	111-76-2                      Potential for dermal absorption
<b>Inhalation</b>	May cause respiratory tract irritation.
<b>Ingestion</b>	Harmful if swallowed. May cause stomach distress, nausea or vomiting.
<b>Target organs</b>	Blood. Eyes. Kidney. Liver. Respiratory system. Skin.
<b>Chronic effects</b>	Prolonged or repeated exposure can cause drying, defatting and dermatitis.
<b>Signs and symptoms</b>	Symptoms are prostration, gasping, pallor, and uncoordinated movements. Symptoms may include redness, oedema, drying, defatting and cracking of the skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
<b>Potential environmental effects</b>	Components of this product have been identified as having potential environmental concerns.

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## 3. Composition/Information on Ingredients

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<b>Ingredient(s)</b>	<b>CAS #</b>	<b>Percent</b>
Ethylene glycol monobutyl ether	111-76-2	30 - 60

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## 4. First Aid Measures

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<b>First aid procedures</b>	
<b>Eye contact</b>	Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately.
<b>Skin contact</b>	Immediately flush with cool water for 15 minutes while removing contaminated clothing and shoes. Discard or wash well before reuse. Obtain medical attention if irritation persists.
<b>Inhalation</b>	If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention. If breathing has stopped, trained personnel should administer CPR immediately.
<b>Ingestion</b>	Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.
<b>Notes to physician</b>	Symptoms may be delayed.

**General advice**

Avoid contact with eyes and skin. Keep out of reach of children. Immediate medical attention is required. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. If you feel unwell, seek medical advice (show the label where possible).

## 5. Fire-fighting Measures

<b>Flammable properties</b>	Not flammable by WHMIS criteria.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Carbon dioxide. Alcohol foam. Dry chemical.
<b>Unsuitable extinguishing media</b>	Not available
<b>Protection of firefighters</b>	
<b>Specific hazards arising from the chemical</b>	Not available
<b>Protective equipment for firefighters</b>	Firefighters should wear full protective clothing including self contained breathing apparatus.
<b>Hazardous combustion products</b>	May include and are not limited to: Oxides of carbon.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	Not available
<b>Sensitivity to static discharge</b>	Not available

## 6. Accidental Release Measures

<b>Personal precautions</b>	Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
<b>Environmental precautions</b>	Do not discharge into lakes, streams, ponds or public waters.
<b>Methods for containment</b>	Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.
<b>Methods for cleaning up</b>	Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills in original containers for re-use.

## 7. Handling and Storage

<b>Handling</b>	Use good industrial hygiene practices in handling this material. Do not get this material in your eyes, on your skin, or on your clothing. When using do not eat or drink. Avoid contact with skin and clothing. Avoid contact with eyes. Avoid breathing vapours or mists of this product. Keep container tightly closed. Use only with adequate ventilation. Wash thoroughly after handling.
<b>Storage</b>	Keep out of the reach of children. Store in a closed container away from incompatible materials. Keep out of reach of children.

## 8. Exposure Controls / Personal Protection

**Exposure limit values****Ingredient(s)****Exposure limit values**

Ethylene glycol monobutyl ether

**ACGIH-TLV**  
TWA: 20 ppm

**Engineering controls**

General ventilation normally adequate.

**Personal protective equipment****Eye/Face protection**

Wear chemical goggles.

**Hand protection**

Avoid contact with the skin.  
Rubber gloves. Confirm with a reputable supplier first.

**Skin and body protection**

As required by employer code.

<b>Respiratory protection</b>	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
<b>General hygiene considerations</b>	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

## 9. Physical and Chemical Properties

<b>Appearance</b>	Liquid
<b>Colour</b>	Clear blue
<b>Form</b>	Liquid
<b>Odour</b>	Ammonia
<b>Odour threshold</b>	Not available
<b>Physical state</b>	Liquid
<b>pH</b>	9.68 - 10.32 (100%)
<b>Freezing point</b>	Not available
<b>Boiling point</b>	Not available
<b>Pour point</b>	Not available
<b>Evaporation Rate</b>	Not available
<b>Flash point</b>	> 95 °C (> 203.00 °F) TCC
<b>Auto-ignition temperature</b>	Not available
<b>Flammability limits in air, lower, % by volume</b>	Not available
<b>Flammability Limits in Air, Upper, % by Volume</b>	Not available
<b>Vapour pressure</b>	Not available
<b>Vapour density</b>	Not available
<b>Specific gravity</b>	0.865 - 1.007
<b>Octanol/water coefficient</b>	Not available

## 10. Stability and Reactivity

<b>Reactivity</b>	This product may react with strong oxidizing agents.
<b>Possibility of hazardous reactions</b>	Hazardous polymerisation does not occur.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Conditions to avoid</b>	Do not mix with other chemicals.
<b>Incompatible materials</b>	Strong oxidizing agents. Acids.
<b>Hazardous decomposition products</b>	May include and are not limited to: Oxides of carbon.

## 11. Toxicological Information

### Component analysis - LC50

Ingredient(s)	LC50
Ethylene glycol monobutyl ether	2.21 mg/l/4h rat

### Component analysis - Oral LD50

Ingredient(s)	LD50
Ethylene glycol monobutyl ether	470 mg/kg rat; 320 mg/kg rabbit

### Effects of acute exposure

<b>Eye</b>	May cause irritation.
<b>Skin</b>	May cause irritation. This product may be harmful if it is absorbed through the skin.

### NIOSH - Pocket Guide - Skin Notations

Ethylene glycol monobutyl ether	111-76-2	Potential for dermal absorption
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**Inhalation** May cause respiratory tract irritation.

**Ingestion** Harmful if swallowed. May cause stomach distress, nausea or vomiting.

**Sensitisation** Non-hazardous by WHMIS criteria.

**Local effects** Toxic in contact with skin.

**Chronic effects** Non-hazardous by WHMIS criteria.

<b>Carcinogenicity</b>	See below.
<b>ACGIH - Threshold Limit Values - Carcinogens</b>	
Ethylene glycol monobutyl ether	111-76-2 A3 - Confirmed animal carcinogen with unknown relevance to humans.
<b>IARC - Group 3 (Not Classifiable)</b>	
Ethylene glycol monobutyl ether	111-76-2 Monograph 88 [2006]
<b>Mutagenicity</b>	Non-hazardous by WHMIS criteria.
<b>Reproductive effects</b>	Non-hazardous by WHMIS criteria.
<b>Teratogenicity</b>	Non-hazardous by WHMIS criteria.
<b>Name of Toxicologically Synergistic Products</b>	Not available

## 12. Ecological Information

<b>Ecotoxicity</b>	Components of this product have been identified as having potential environmental concerns.	
<b>Ecotoxicity - Freshwater Fish - Acute Toxicity Data</b>		
Ethylene glycol monobutyl ether	111-76-2	96 Hr LC50 Lepomis macrochirus: 1490 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 2950 mg/L
<b>Ecotoxicity - Water Flea - Acute Toxicity Data</b>		
Ethylene glycol monobutyl ether	111-76-2	24 Hr EC50 Daphnia magna: 1698 - 1940 mg/L; 48 Hr EC50 Daphnia magna: >1000 mg/L
<b>Persistence and degradability</b>	Not available	
<b>Bioaccumulation/accumulation</b>	Not available	
<b>Mobility in environmental media</b>	Not available	
<b>Environmental effects</b>	Not available	
<b>Aquatic toxicity</b>	Not available	
<b>Partition coefficient</b>	Not available	
<b>Chemical fate information</b>	Not available	
<b>Other adverse effects</b>	Not available	

## 13. Disposal Considerations

<b>Disposal instructions</b>	Dispose in accordance with all applicable regulations.
<b>Waste from residues / unused products</b>	Not available
<b>Contaminated packaging</b>	Not available

## 14. Transport Information

### Transportation of Dangerous Goods (TDG - Canada)

**Basic shipping requirements:**

<b>Proper shipping name</b>	TOXIC LIQUID, ORGANIC, N.O.S. (2-Butoxyethanol)
<b>Hazard class</b>	6.1
<b>UN number</b>	UN2810
<b>Packing group</b>	III
<b>Additional information:</b>	
<b>Special provisions</b>	16



## 15. Regulatory Information

**Canadian federal regulations** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

**Canada - CEPA - Schedule I - List of Toxic Substances**

Ethylene glycol monobutyl ether 111-76-2 Present

**Canada - WHMIS - Ingredient Disclosure List**

Ethylene glycol monobutyl ether 111-76-2 1 %

**WHMIS classification** Class D - Division 1B, 2B

**WHMIS status** Controlled

**WHMIS labeling**



**Inventory Status**

Country(s) or region	Inventory Name	On Inventory (Yes/No)*
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

## 16. Other Information

LEGEND HMIS	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	* 2
Flammability	0
Physical Hazard	0
Personal Protection	X

**Disclaimer**

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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**Other Information** For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.

This MSDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.