


Section 1 - Chemical Product and Company Identification

Product Name	EGMBE
Synonyms	Ethylene glycol monobutyl ether; 2-Butoxyethanol; Glycol ether EB; Butyl cellosolve; Butyl glycol
Product Use	Solvent, cleaner, degreaser
Restriction on Use	None identified
Manufacturer/Supplier	CFR Chemicals 38451 Range Road 22 County of Red Deer T4E 2N6
General Assistance	1 (877) 269-3419
Emergency Telephone	Not Dangerous Goods – Call General Assistance
Date of Preparation of SDS	April 1, 2017

Section 2 – Hazard Identification

Signal Word	Warning
GHS Pictogram(s)	
Target Organs	Blood, Kidney, Liver, Central nervous system, Testes.
WHMIS Classification	
B3	Combustible Liquid
D2B	Toxic Material Causing Other Toxic Effects
Hazard Statement:	
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.
Precautionary Statement	
P210	Keep away from heat, hot surface, sparks, open flames and other ignition sources. No smoking
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/eye protection/face protection.
Response	
P321	Specific Treatment: See this Label
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330	Rinse Mouth
P302 + P352	IF ON SKIN: Wash with plenty of water.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.



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P362 + P364 Take off contaminated clothing and wash it before reuse.
P304 + P340 IF INHALED: Remove person 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.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P337 + P313 if eye irritation persists: Get medical advice/attention.
P370 + P378 In case of fire: Use dry sand, dry chemical, or alcohol-resistant foam to extinguish.

Storage

P403 +P235 Store in well-ventilated place. Keep Cool

Disposal

P501 Dispose of contents/container to an approved waste disposal unit.

GHS Classification

Flammable liquids (Category 4)
Acute toxicity, Oral (Category 4)
Acute toxicity, Inhalation (Category 4)
Acute toxicity, Dermal (Category 4)
Skin corrosion/irritation (Category 2)
Serious eye damage/eye irritation (Category 2A)

HMIS Classification

Health Hazard 2
Chronic Health Hazard *
Flammability 2
Physical Hazards 0

Potential Health Effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.
Skin May be harmful if absorbed through skin. Causes skin irritation.
Eye Causes eye irritation.
Ingestion May be harmful if swallowed.

Section 3 – Composition Information on Ingredients

HAZARDOUS INGREDIENT	Hazardous Ingredient, Synonyms	PERCENT	CAS NUMBER
Ethylene Glycol Monobutyl Ether	EGMBE; 2-Butoxyethanol; Glycol ether EB; Butyl cellosolve; Butyl glycol * = Various ** = Mixture *** = Proprietary	≤100%	111-76-2
Chemical Formula	C ₆ H ₁₄ O ₂		

Section 4 - First Aid Measures

Inhalation If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Eye Contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact Wash off with plenty of water. Consult a physician.

Ingestion	DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Most Important Symptoms/Effects	
Acute	Human exposure above 200 ppm can be expected to cause narcosis, damage to the kidney and liver and present an abnormal blood picture showing erythropenia, reticulocytosis, granulocytosis, leukocytosis, and would be likely to cause fragility of erythrocytes and hematuria. Swallowing of 2-butoxyethanol results in a sour taste that turns to a burning sensation and is followed by numbness of the tongue which indicates paralysis of the sensory nerve endings., Central nervous system depression, Headache, narcosis
Delayed	No data available
Note to Physician	Not Applicable

Section 5 – Fire-Fighting Measures

Flash Point (°C)	67°C
Flash Point Method	PMCC
Auto Ignition Temperature	245°C
Conditions of Flammability	Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/ hot surface. No smoking.
Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide fog.
Unsuitable Extinguishing Media	None.
Unusual Fire/	
Explosion Hazard	No data available.
Hazardous Combustion	
Products	Carbon oxides
Special Protective Equipment and	
Precautions for Firefighters	Wear full firefighting gear and self-contained breathing apparatus (SCBA) for protection against possible exposure if necessary.

Section 6 – Accidental Release Measures

Personal precautions	Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
Methods and materials for containment and cleaning up	Contain free liquid if possible. Pick up by covering with an activated carbon absorbent or other suitable inert absorbent material (e.g. sand, sawdust, general-purpose binder). Take up & place in closed containers. Ventilate area & wash spill site after material pickup is complete. Contain and dispose of wash water in accordance with local regulations.

Section 7 – Handling and Storage

Precautions for safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge.
Conditions for safe storage	Keep container tightly closed in a dry and well-ventilated place.
Incompatible Conditions	Heat, flames and sparks.
Incompatible Materials	Strong oxidizing agents.

Section 8 – Exposure Controls / Personal Protection

Occupational Exposure Limits

Ingredient Name	Exposure Limits
	Canada, Alberta, Occupational Health and Safety Code (table 2: OEL)
	TWA: 20ppm
Ethylene Glycol Monobutyl Ether	ACGIH TLV
	TWA: 20ppm

Personal protective equipment

Eye/face protection	Chemical safety glasses with side shields to prevent eye contact. As a general rule do not wear contact lenses when handling chemicals.
Skin protection	Wear chemical resistant gloves, impermeable protective clothing and safety shoes.
Respiratory protection	Use NIOSH approved respirators and components.
General hygiene	
Considerations	Handle in accordance with good industrial hygiene and safety.
Specific engineering controls	Use mechanical exhaust or laboratory fumehood to avoid exposure. Safety shower, eye wash, and fire extinguisher should be present.

Section 9 – Physical and Chemical Properties

Physical State	Liquid	Water Solubility	Soluble
Appearance & Odour	Clear, colourless, sweet alcohol-like smell	Boiling Point	Not applicable
Vapour Pressure	0.2 mmHg @ 20.0°C	Boiling Range	169 – 172°C
Odour Threshold	Not available.	Melting Point	-75°C
Evaporation Rate	Not available.	Freezing Point	-75°C
Vapour Density	4.8	Lower Explosive Limit (LEL)	1.1 %
Specific Gravity	0.902	Upper Explosive Limit (UEL)	12.7 %
pH	Not available.	Partition coefficient (n-octanol/water)	2.9
Flammability (Solid, Gas)	Not applicable.	Viscosity	3.642mm ² /s @ 20°C
Decomposition Temperature	Not available.		

Section 10 – Stability and Reactivity

Reactivity	Containers may rupture or explode if exposed to heat.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No data available
Conditions to avoid	Heat, flames and sparks.
Materials to avoid	Strong oxidizing agents.
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. - Carbon oxides. Other decomposition products - No data available

Section 11- Toxicological Information

Information on Likely Routes of Exposure

Inhalation	Causes respiratory tract irritation.
Skin contact	Causes skin irritation.
Eye contact	Causes eye irritation.
Ingestion	May be harmful if swallowed.
Acute and Chronic Toxicity	No data available

Acute toxicity

Product/Ingredient Name	Result	Species	Dose	Exposure
Ethylene Glycol	LD50 Oral	Rat	880mg/kg	-
Monobutyl Ether	LD50 Dermal	Rabbit	1060mg/kg	-

Skin corrosion/irritation Skin - Rabbit - Skin irritation - 24 h - OECD Test Guideline 404

Serious eye damage/eye irritation Eyes - Rabbit - Moderate eye irritation - 24 h

Respiratory or skin sensitization No data available

Germ cell Mutagenicity No data available

Carcinogenicity

IARC: Group 3: Not classifiable as to its carcinogenicity in humans (2-Butoxyethanol)
 ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Reproductive toxicity No data available.

Teratogenicity No data available.

Specific target organ toxicity - single exposure (Globally Harmonized System)
 Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
 No data available

Aspiration hazard No data available

Delayed and Immediate Effects and also Chronic Effects from Short and Long Term Exposure

Short Term Exposure

Potential immediate Health Effects No data available.

Potential Delayed Health Effects No data available.

Long Term Exposure

Potential immediate Health Effects	No data available.
Potential Delayed Health Effects	No data available.
Potential Chronic Effects	No data available.
Synergistic effects	No data available

Section 12 – Ecological Information

Toxicity

Product / Ingredient Name	Result	Species	Exposure
2-Ethylhexanol	Acute LC50 1474mg/L	Fish – Oncorhynchus mykiss	96 Hr
	Acute EC50 - 1550mg/L	Daphnia – Daphnia magna	48 Hr

Persistence and degradability

Biodegradability Aerobic
 Result: 94% - Readily biodegradable
 Method: OECD Test Guideline 301C

Bioaccumulative potential

No data available

Mobility in soil

No data available

PBT and vPvB assessment

No data available

Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

Section 13 – Disposal Considerations

Product

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

Section 14 - Transportation Information

CANADA Transportation of Dangerous Goods (TDG)

Not Dangerous Goods

Section 15 – Regulatory Information

DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act)

All components of this product are in compliance with the chemical notification requirements of the NSN Regulations under CEPA, 1999.

TSCA Inventory

All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations and the SDS contains all the information required by the Hazardous Products Regulations.



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Section 16 – Other Information

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SDS Prepared by: CFR Lab Manager

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