

Canada : According to WHMIS

2.2.1 Classification of the substance or mixture

Class D-1B : Material causing immediate and serious toxic effects (Toxic). (ethane-1,2-diol)

Class D2A : Material causing other toxic effects (Very toxic).

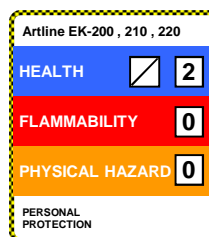
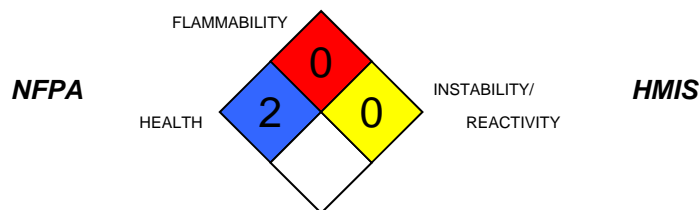
2.2.2 Label elements



2.2.3 Other hazards

In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS)

2.3 Other information



SECTION 3: Composition/information on ingredients

Substance/Mixture : Mixture

Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Classification (OSHA HCS 2012)	
			Hazard Class	Hazard statement
Water	60 ~ 70	7732-18-5	none	none
ethane-1,2-diol (Ethylene Glycol)	10 ~ 20	107-21-1	Acute Tox.(oral) 4	H302
2,2'-oxydiethanol	5 ~ 15	111-46-6	Acute Tox.(oral) 4	H302
Dyestuff	1 ~ 10	Confidential	none	none
Others	1 ~ 10	Confidential	none	none
total	100			

SECTION 4: First-aid measures

4.1. Description of first aid measures

IF INHALED : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Consult a doctor if symptoms persist.

IF ON SKIN : Remove/Take off immediately all contaminated clothing.Wash with soap and water. If skin irritation/rash occurs or feel unwell, consult a doctor for medical advice.

IF IN EYES : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.Continue rinsing.If eye irritation persists, get medical advice/attention.

IF SWALLOWED : After rinse mouth immediately, give about 250 ml of water or milk and thin in the stomach, and do not vomit forcibly.Moreover, do not give anything from the mouth to the patient when not conscious.Receive the doctor's treatment (stomach pump) promptly.

Note to Physicians :

All treatments should be based on observed signs and symptoms of distress in the patient.

Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media : Dry chemical powder, foam or carbon dioxide
 Unsuitable extinguishing media : none

5.2. Special hazards arising from the substance or mixture

For initial stage extinction, carbon dioxide or dry chemical powder.

When a fire extends, fire is extinguished by a large amount of water spray.

Do not discharge extinguishing waters into the aquatic environment.

5.3. Advice for firefighters

In the extinction work, an appropriate protective equipment (gloves, glasses, and mask) has to be worn.

Because during a fire, hazardous gases may be generated, fire-fighters have to wear self-contained breathing apparatus and other protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe area. Shut off all sources of ignition.

No Flares, smoking or flame in area. Put on protective equipment. Ensure adequate ventilation.

6.2. Environmental precautions

Do not throw the leakage thing directly into environment

6.3. Methods and material for containment and cleaning up

In case of a small spill, remove by absorbing with absorbents (sawdust, soil, sand, waste cloth, etc.), and then wipe off the waste well with waste cloth, and rag.

In case of large spills, prevent leakage by enclosing with nonflammables (earth and sand, etc.) and collect into empty container by scoop, suction equipment or the like.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling : Use with adequate ventilation.
 Avoid contact with skin, eyes and clothing.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage : Keep containers tightly closed and store in a cool and dry place.
 areas and containers : Keep away from heat and flame, ignition source and sunlight.
 Keep out of the reach of children.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ACGIH (2013)

ethane-1,2-diol STEL ceiling 100mg/m³(H)

OSHA PEL

Not listed

Canada Ontario Provincial

ethane-1,2-diol STEL ceiling 100mg/m³(H)

Canada Quebec Provincial

ethane-1,2-diol C 50ppm

8.2. Exposure controls

Personal protective equipment

Respiratory Protection : Avoid breathing vapours. Wear mask to prevent organic gas, if necessary.

Hand Protection : Avoid contact with hands. Wear safety gloves, if necessary.

Eye Protection : Avoid contact with eyes. Wear safety glasses, if necessary.

Skin Protection : Avoid skin contact. Wear personal protection apron, boots, if necessary.

Environmental exposure controls

General advice : Prevent product from entering drains.

Prevent further leakage or spillage if safe to do so.

If the product contaminates rivers and lakes or drains inform respective authorities.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	: brown liquid
Odor	: none
pH	: 7 ~ 9
Boiling point	: No data available
Flash point	: Not applicable
Relative Density (at 77 °F , 25 °C)	: 1.0 ~ 1.2 (g/cm ³)
Solubility in Water	: soluble

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.3. Chemical stability

The product is stable.

10.4. Conditions to Avoid

High temperature, Direct sunlight, Fire

10.5. Incompatible Materials

No data available

10.6. Hazardous decomposition products

CO, CO₂

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: LD/LC50 values that are relevant for classification [ethane-1,2-diol] and [2,2'-oxydiethanol]
Oral-rat	LD50 >300 - <=2,000mg/kg
Dermal-rabbit	LD50 >5,000 mg/kg

Carcinogenicity : This product does not contain any component that is considered a human carcinogen by IARC, ACGIH, OSHA or NTP .

SECTION 12: Ecological information

12.1. Ecotoxicity	: No data available
12.2. Persistence and degradability	: No data available
12.3. Bioaccumulative potential	: No data available
12.4. Mobility in soil	: No data available
12.5. Other adverse effects	: No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal must be made according to official regulations.

Comply with all Federal, State, and Local regulations regarding disposal.

Do not allow product to reach ground, any water course or sewage system.

SECTION 14: Transport information

14.1. UN number	DOT, TDG, IMO / IMDG, IATA / ICAO	: none
14.2. UN proper shipping name	DOT, TDG, IMO / IMDG, IATA / ICAO	: none
14.3. Transport hazard class(es)	DOT, TDG, IMO / IMDG, IATA / ICAO	: none
14.4. Packing group	DOT, TDG, IMO / IMDG, IATA / ICAO	: none
14.5. Environmental hazards	Marine pollutant	: No
14.6. Special precautions for user	EMS Number	: none
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code		: Not applicable.

SECTION 15: Regulatory information

< USA Information >

- OSHA STATUS : This product is not hazardous under 29 CFR 1910.1200.
- TSCA STATUS : All components on TSCA INVENTORY.
- TSCA Hazard Communication Program (40 CFR Part 721) (SNUR) : not Listed
- EPCRA Section 302 Extremely Hazardous Substances (EHS) : not Listed
- EPCRA Section 313 Toxic Chemicals : Listed [ethane-1,2-diol]
- CERCLA Hazardous Substances : RQ 5000 pounds [ethane-1,2-diol]
- CAA Section 112(r) List of Substances for Accidental Release Prevention : not Listed
- California Proposition 65 : Listed [Ethylene Glycol (ingested)]

< Canada Information >

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

- WHMIS Ingredient Disclosure List (SOR/88-64) : [ethane-1,2-diol]
- (WHMIS : Canadian Workplace Hazardous Material Information System)

SECTION 16: Other information, including date of preparation or last revision

- Last Revision Date : 24.06.2015
- Preparation Date : 27.05.2015



EU RoHS Directive(2002/95/EC) and ELV Directive(2000/53/EC)
 This product does not contain lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenylethers (PBDE).

This data sheet may not be enough when evaluating danger or hazard. The above information, which is created from currently available documents, information and data, may be revised when new findings announced. This document has been written on the assumption that when dealing with a large amount of ink on the business case and emergency. When handling as a normal product, please refer to the notes that is described in the produce or packaging. The information contained herein is not intended to provide any kind of warranty other than information, there is no guarantee for the accuracy of the content.