

Canada

Name	CAS number	%
2-Aminoethanol	141-43-5	>1
Potassium hydroxide	1310-58-3	>1
2-Butoxyethanol	111-76-2	>1

Mexico

Name	UN number	IDLH	Classification				CAS number	%
			H	F	R	Special		
2-Aminoethanol	UN2491	30 ppm	3	1	0		141-43-5	>1
Potassium hydroxide	UN1813	-	3	0	0		1310-58-3	>1
2-Butoxyethanol	Not regulated.	700 ppm	2	1	0		111-76-2	>1

4. First aid measures

- Eye contact** : Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 20 minutes. Seek medical attention if symptoms occur.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 20 minutes. Seek medical attention if symptoms occur.
- Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if symptoms occur.
- Ingestion** : Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention if symptoms occur.
- Notes to physician** : No specific antidote. Medical staff must contact Poison Control Center.

5. Fire-fighting measures

- Flammability of the product** : Combustible.
- Products of combustion** : These products are carbon oxides, nitrogen oxides. Some metallic oxides.
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : No specific hazard.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

- Personal precautions** : Use suitable protective equipment.
- Environmental precautions and clean-up methods** : Wash small spills to sanitary sewer. Large spills-confine spill, soak up with approved absorbent, shovel product into approved container for disposal.

7. Handling and storage

- Handling** : Keep container closed. Use only with adequate ventilation. Do not breathe vapor or mist. Wash thoroughly after handling.
- Storage** : Keep container tightly closed. Keep container in a cool, well-ventilated area.

8 . Exposure controls/personal protection

United States

Product name

2-Aminoethanol

Exposure limits

ACGIH TLV (United States, 1/2005).

STEL: 6 ppm 15 minute(s). Form: All forms.

TWA: 7.5 mg/m³ 8 hour(s). Form: All forms.

TWA: 3 ppm 8 hour(s). Form: All forms.

NIOSH REL (United States, 12/2001).

STEL: 15 mg/m³ 15 minute(s). Form: All forms.

STEL: 6 ppm 15 minute(s). Form: All forms.

TWA: 8 mg/m³ 10 hour(s). Form: All forms.

TWA: 3 ppm 10 hour(s). Form: All forms.

OSHA PEL (United States, 8/1997).

TWA: 6 mg/m³ 8 hour(s). Form: All forms.

TWA: 3 ppm 8 hour(s). Form: All forms.

Potassium hydroxide

ACGIH TLV (United States, 1/2005).

CEIL: 2 mg/m³ Form: All forms.

NIOSH REL (United States, 12/2001).

TWA: 2 mg/m³ 10 hour(s). Form: All forms

OSHA PEL 1989 (United States, 3/1989).

CEIL: 2 mg/m³ Form: All forms.

2-Butoxyethanol

ACGIH TLV (United States, 1/2005).

TWA: 20 ppm 8 hour(s). Form: All forms.

NIOSH REL (United States, 12/2001). Skin

TWA: 24 mg/m³ 10 hour(s). Form: All forms.

TWA: 5 ppm 10 hour(s). Form: All forms.

OSHA PEL (United States, 8/1997). Skin

TWA: 240 mg/m³ 8 hour(s). Form: All forms.

TWA: 50 ppm 8 hour(s). Form: All forms.

Canada

Product name

2-Aminoethanol

Exposure limits

ACGIH TLV (United States, 9/2004).

STEL: 15 mg/m³ 15 minute(s). Form: All forms.

STEL: 6 ppm 15 minute(s). Form: All forms.

TWA: 7.5 mg/m³ 8 hour(s). Form: All forms.

TWA: 3 ppm 8 hour(s). Form: All forms.

Potassium hydroxide

ACGIH TLV (United States, 1/2005).

CEIL: 2 mg/m³ Form: All forms.

2-Butoxyethanol

ACGIH TLV (Canada, 1/2005).

TWA: 20 ppm 8 hour(s). Form: All forms.

Mexico

Product name

2-Aminoethanol

Exposure limits

NOM-010-STPS (Mexico, 9/2000).

CCT: 15 mg/m³ 15 minute(s). Form: All forms.

CCT: 6 ppm 15 minute(s). Form: All forms.

CPT: 8 mg/m³ 8 hour(s). Form: All forms.

CPT: 3 ppm 8 hour(s). Form: All forms.

Potassium hydroxide

ACGIH TLV (United States, 1/2005).

CEIL: 2 mg/m³ Form: All forms.

2-Butoxyethanol

NOM-010-STPS (Mexico, 9/2000). Skin

CCT: 360 mg/m³ 15 minute(s). Form: All forms.

CCT: 75 ppm 15 minute(s). Form: All forms.

CPT: 120 mg/m³ 8 hour(s). Form: All forms.

CPT: 26 ppm 8 hour(s). Form: All forms.

Engineering measures	: Use only with adequate ventilation.
Personal protection	
Eyes	: Splash goggles.
Skin	: Synthetic apron.
Respiratory	: Vapor respirator.
Hands	: Nitrile gloves. Practice safe workplace habits. Minimize body contact with this, as well as all chemicals in general.
HMIS Code/Personal protective equipment	: D

Hygiene measures	: Wash hands, forearms and face thoroughly after handling compounds and before eating, smoking and using the lavatory and at the end of the day. Follow good industrial hygiene practice.
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9 . Physical and chemical properties

Physical state	: Liquid.
Flash point	: The lowest known value is Open cup: 61.85°C (143.3°F). (Cleveland.). (2-Butoxyethanol)
Auto-ignition temperature	: The lowest known value is 244°C (471.2°F) (2-Butoxyethanol).
Flammable limits	: The greatest known range is Lower: 1.1% Upper: 12.7% (2-Butoxyethanol)
Color	: Green.
Odor	: Mild.
pH	: Basic.
Boiling/condensation point	: >100°C (212°F)
Melting/freezing point	: 0°C (32°F)
Critical temperature	: The lowest known value is 367.9°C (694.2°F) (2-Butoxyethanol).
Relative density	: >1 (Water = 1)
Vapor pressure	: The highest known value is 0.01 kPa (0.08 mm Hg) (at 20°C) (2-Aminoethanol).
Vapor density	: >1 (Air = 1)
Evaporation rate	: <1 compared with Butyl acetate.
Solubility	: Easily soluble in cold water, hot water.

10 . Stability and reactivity




Stability and reactivity	: The product is stable.
Incompatibility with various substances	: Highly reactive or incompatible with the following materials: acids and moisture. Reactive with oxidizing materials and alkalis.
Hazardous polymerization	: Will not occur.
Conditions of reactivity	: None known.

11 . Disposal considerations

Waste disposal	: Dispose material in accordance with all local, state, and federal regulations.
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12 . Transport information

NAERG : 153

Regulatory information	Proper shipping name	Class	UN number	PG	Label
UN / IMDG / IATA Classification	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium hydroxide)	8	UN3266	III	
DOT Classification	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium hydroxide) ORM-D Consumer Commodity. Please refer to 49 CFR 173.54, 203, .241 for details.	8	UN3266	III	
TDG Classification	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium hydroxide)	8	UN3266	III	

13 . Regulatory information

United States

HCS Classification : Toxic material
Corrosive material
Target organ effects

U.S. Federal regulations : TSCA : All components listed.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: 2-Aminoethanol; Potassium hydroxide; 2-Butoxyethanol

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:

2-Aminoethanol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; Potassium hydroxide: Immediate (acute) health hazard, Delayed (chronic) health hazard; 2-Butoxyethanol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: Potassium hydroxide

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

SARA 313

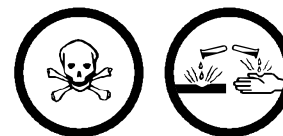
Form R - Reporting requirements	Product name	CAS number	Concentration
Supplier notification	2-Butoxyethanol	111-76-2	>1
	2-Butoxyethanol	111-76-2	>1

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations : Pennsylvania RTK: 2-Aminoethanol: (generic environmental hazard); Potassium hydroxide: (environmental hazard, generic environmental hazard); 2-Butoxyethanol: (environmental hazard, generic environmental hazard)
Massachusetts RTK: 2-Aminoethanol; Potassium hydroxide; 2-Butoxyethanol
New Jersey: 2-Aminoethanol; Potassium hydroxide; 2-Butoxyethanol
California prop. 65: No products were found.

Canada**WHMIS (Canada)**

: Class D-1A: Material causing immediate and serious toxic effects (Very toxic).
Class E: Corrosive material

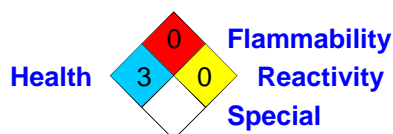


DSL : All components listed.

This product has been classified in accordance with the hazard criteria of the Canadian CPR, the United States OSHA and the Mexican NOM -018-STPS-2000. This MSDS contains all the information required by the CPR, OSHA and NOM -018-STPS-2000.

Mexico**Classification**

:

**HAZARD RATINGS**

4- Extreme
3- Serious
2- Moderate
1- Slight
0- Minimal

International lists

: This product, (and its ingredients) is (are) listed on national inventories, or is (are) exempted from being listed, Australia (AICS), in Europe (EINECS/ELINCS), in Korea (TCCL), in Japan (METI), in the Philippines (RA6969).

14 . Other information**References**

: - Manufacturer's Material Safety Data Sheet. - 29CFR Part1910.1200 OSHA MSDS Requirements. - 49CFR Table List of Hazardous Materials, UN#, Proper Shipping Names, PG. - Canada Gazette Part II, Vol. 122, No. 2. Registration SOR/88-64, 31 December 1987. Hazardous Products Act "Ingredient Disclosure List" - Canadian Transport of Dangerous Goods, Regulations and Schedules, Clear Language version 2005. - Official Mexican Standards NOM-018-STPS-2000 and NOM-004-SCT2-1994.

Date of issue

: 08/15/2006

Version

: 1

Notice to reader

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