

Material Safety Data Sheet

Aimterge 520 A



1. Product and company identification

Product name	: Aimterge 520 A
Synonym	: Not applicable
Material uses	: Industrial applications: Solvent.
Manufacturer	: AIM 9100 Henri Bourassa East Montreal, QC H1E 2S4 (514) 494-2000 In the United States: AIM 25 Kenney Drive Cranston, RI 02920 (800) CALL-AIM
Validation date	: 9/22/2016
Print date	: 9/22/2016
<u>In case of emergency</u>	: INFOTRAC North America: (800) 535-5053 International: (352) 323-3500
Product type	: Liquid. (clear)

2. Hazards identification

Emergency overview

Physical state	: Liquid. (clear)
Color	: Colorless to light yellow.
Odor	: Alcohol like.
Signal word	: Warning
Hazard statements	: COMBUSTIBLE LIQUID AND VAPOR. CAUSES RESPIRATORY TRACT, EYE AND SKIN BURNS. HARMFUL IF INHALED, ABSORBED THROUGH SKIN OR SWALLOWED. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.
Precautionary measures	: Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Do not get in eyes. Do not get on skin. Do not eat, drink or smoke when using this product. Avoid contact with eyes, skin and clothing. Keep away from heat and flame. Keep container tightly closed. Wash thoroughly after handling.
OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Routes of entry	: Inhalation. Ingestion.
<u>Potential acute health effects</u>	
Inhalation	: Toxic by inhalation. Corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	: Toxic if swallowed. May cause burns to mouth, throat and stomach.
Skin	: Corrosive to the skin. Causes burns. Toxic in contact with skin.
Eyes	: Corrosive to eyes. Causes burns.

Potential chronic health effects

2. Hazards identification

- Chronic effects** : Contains material that can cause target organ damage.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.
- Target organs** : Contains material which causes damage to the following organs: lungs, the reproductive system, mucous membranes, digestive system.
Contains material which may cause damage to the following organs: blood, kidneys, liver, spleen, lymphatic system, upper respiratory tract, skin, bone marrow, central nervous system (CNS), eye, lens or cornea.

Over-exposure signs/symptoms

- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Ingestion** : Adverse symptoms may include the following:
stomach pains
- Skin** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Eyes** : Adverse symptoms may include the following:
pain
watering
redness

- Medical conditions aggravated by over-exposure** : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (Section 11)

3. Composition/information on ingredients

United States

Name	CAS number	%
2-aminoethanol	141-43-5	30 - 40
2-butoxyethanol	111-76-2	30 - 40
Alcohols, C8-10, ethoxylated propoxylated	68603-25-8	0.1 - 10

Canada

Name	CAS number	%
2-aminoethanol	141-43-5	30 - 40
2-butoxyethanol	111-76-2	30 - 40
Alcohols, C8-10, ethoxylated propoxylated	68603-25-8	0.1 - 10

Mexico

Name	CAS number	UN number	%	IDLH	Classification			
					H	F	R	Special

3. Composition/information on ingredients

2-aminoethanol	141-43-5	UN3082	30 - 40	30 ppm	3	2	0	-
2-butoxyethanol	111-76-2	UN2810	30 - 40	700 ppm	3	2	0	-
Alcohols, C8-10, ethoxylated propoxylated	68603-25-8	Not available.	0.1 - 10	-	2	1	0	-

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

5. Fire-fighting measures

- Flammability of the product** : Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
- Extinguishing media**
- Suitable** : Use dry chemical, CO₂, water spray (fog) or foam.
- Not suitable** : Do not use water jet.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
- 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.
- Special remarks on fire hazards** : When heated to decomposition, it emits acrid smoke and irritating fumes.

6. Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for cleaning up**
- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

- Handling** : Do not ingest. Do not get in eyes or on skin or clothing. Keep container closed. Use only with adequate ventilation. Do not breathe vapor or mist. Keep away from heat, sparks and flame. Wash thoroughly after handling.
- Storage** : Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits
2-aminoethanol	<p>ACGIH (United States, 0/1994). TWA: 3 ppm STEL: 6 ppm TWA: 7.5 mg/m³ STEL: 15 mg/m³ CEIL: 6 mg/m³</p> <p>NIOSH (United States, 0/1994). TWA: 3 ppm STEL: 6 ppm CEIL: 15 ppm TWA: 8 mg/m³ STEL: 15 mg/m³</p> <p>OSHA (United States, 0/1989). TWA: 3 ppm STEL: 6 ppm CEIL: 5.1 ppm TWA: 8 mg/m³ STEL: 15 mg/m³</p> <p>ACGIH TLV (United States, 3/2016). TWA: 3 ppm 8 hours.</p>

8. Exposure controls/personal protection

2-butoxyethanol

TWA: 7.5 mg/m³ 8 hours.
 STEL: 6 ppm 15 minutes.
 STEL: 15 mg/m³ 15 minutes.
OSHA PEL 1989 (United States, 3/1989).
 TWA: 3 ppm 8 hours.
 TWA: 8 mg/m³ 8 hours.
 STEL: 6 ppm 15 minutes.
 STEL: 15 mg/m³ 15 minutes.
NIOSH REL (United States, 10/2013).
 TWA: 3 ppm 10 hours.
 TWA: 8 mg/m³ 10 hours.
 STEL: 6 ppm 15 minutes.
 STEL: 15 mg/m³ 15 minutes.
OSHA PEL (United States, 2/2013).
 TWA: 3 ppm 8 hours.
 TWA: 6 mg/m³ 8 hours.

ACGIH (United States, 0/1994). Absorbed through skin.
 TWA: 25 ppm
 TWA: 121 mg/m³

NIOSH (United States, 0/1994). Absorbed through skin.
 TWA: 5 ppm
 TWA: 24 mg/m³

OSHA (United States, 0/1989). Absorbed through skin.
 TWA: 25 ppm
 CEIL: 400 ppm
 TWA: 120 mg/m³

OSHA PEL 1989 (United States, 3/1989). Absorbed through skin.
 TWA: 25 ppm 8 hours.
 TWA: 120 mg/m³ 8 hours.

NIOSH REL (United States, 10/2013). Absorbed through skin.
 TWA: 5 ppm 10 hours.
 TWA: 24 mg/m³ 10 hours.

ACGIH TLV (United States, 3/2016).
 TWA: 20 ppm 8 hours.

OSHA PEL (United States, 2/2013). Absorbed through skin.
 TWA: 50 ppm 8 hours.
 TWA: 240 mg/m³ 8 hours.

Canada

<u>Occupational exposure limits</u>		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	Notations
2-aminoethanol	US ACGIH 3/2016	3	7.5	-	6	15	-	-	-	-	
	AB 4/2009	3	7.5	-	6	15	-	-	-	-	[3]
	BC 5/2015	3	-	-	6	-	-	-	-	-	
	ON 7/2015	3	-	-	6	-	-	-	-	-	
	QC 1/2014	3	7.5	-	6	15	-	-	-	-	
	SK 7/2013	-	-	3 PPM	-	-	6 PPM	-	-	-	
2-butoxyethanol	US ACGIH 3/2016	20	-	-	-	-	-	-	-	-	
	AB 4/2009	20	97	-	-	-	-	-	-	-	[3]
	BC 5/2015	20	-	-	-	-	-	-	-	-	
	ON 7/2015	20	-	-	-	-	-	-	-	-	
	QC 1/2014	20	97	-	-	-	-	-	-	-	
	SK 7/2013	-	-	20 PPM	-	-	30 PPM	-	-	-	

[3]Skin sensitization

8. Exposure controls/personal protection

Mexico

Occupational exposure limits

Ingredient	Exposure limits
2-aminoethanol	NOM-010-STPS (Mexico, 4/2016). LMPE-CT: 6 ppm 15 minutes. LMPE-PPT: 3 ppm 8 hours.
2-butoxyethanol	NOM-010-STPS (Mexico, 4/2016). Absorbed through skin. LMPE-PPT: 20 ppm 8 hours.

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

Physical state	: Liquid. (clear)
Flash point	: Closed cup: 75°C (167°F) [ASTM D-56 (Tagliabue).]
Color	: Colorless to light yellow.
Odor	: Alcohol like.
pH	: 11.8
Boiling/condensation point	: 102°C (215.6°F)
Relative density	: 0.96 to 0.97
Aerosol product	

10. Stability and reactivity

Chemical stability	: The product is stable.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials	: Reactive or incompatible with the following materials: acids oxidizing materials
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.

11. Toxicological information

United States

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-aminoethanol	LD50 Oral	Guinea pig	620 mg/kg	-
	LD50 Oral	Mouse	700 mg/kg	-
	LD50 Oral	Rat	1720 mg/kg	-
	LD50 Oral	Rat	1720 mg/kg	-
2-butoxyethanol	LC50 Inhalation Gas.	Rat	450 ppm	4 hours
	LD50 Dermal	Rabbit	220 mg/kg	-
	LD50 Dermal	Rabbit	220 mg/kg	-
	LD50 Oral	Mouse	1230 mg/kg	-
	LD50 Oral	Rabbit	300 mg/kg	-
	LD50 Oral	Rat	250 mg/kg	-
	LD50 Oral	Rat	470 mg/kg	-
	LD50 Oral	Rat	3800 mg/kg	-
Alcohols, C8-10, ethoxylated propoxylated	LD50 Oral	Rat	3800 mg/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
2-aminoethanol	Eyes - Severe irritant	Rabbit	-	250 Micrograms	-
	Skin - Moderate irritant	Rabbit	-	505 milligrams	-
2-butoxyethanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
Alcohols, C8-10, ethoxylated propoxylated	Eyes - Severe irritant	Rabbit	-	24 hours 100 microliters	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP	ACGIH	EPA	NIOSH
2-aminoethanol	-	-	-	-	-	None.
2-butoxyethanol	-	3	-	A3	-	None.

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Canada

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-aminoethanol	LD50 Oral	Guinea pig	620 mg/kg	-
	LD50 Oral	Mouse	700 mg/kg	-
	LD50 Oral	Rat	1720 mg/kg	-
	LD50 Oral	Rat	1720 mg/kg	-
2-butoxyethanol	LC50 Inhalation Gas.	Rat	450 ppm	4 hours
	LD50 Dermal	Rabbit	220 mg/kg	-
	LD50 Dermal	Rabbit	220 mg/kg	-
	LD50 Oral	Mouse	1230 mg/kg	-
	LD50 Oral	Rabbit	300 mg/kg	-
	LD50 Oral	Rat	250 mg/kg	-
Alcohols, C8-10, ethoxylated propoxylated	LD50 Oral	Rat	470 mg/kg	-
	LD50 Oral	Rat	3800 mg/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
2-aminoethanol	Eyes - Severe irritant	Rabbit	-	250 Micrograms	-
	Skin - Moderate irritant	Rabbit	-	505 milligrams	-
2-butoxyethanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
Alcohols, C8-10, ethoxylated propoxylated	Eyes - Severe irritant	Rabbit	-	24 hours 100 microliters	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
2-aminoethanol	-	-	-	None.	-	-
2-butoxyethanol	A3	3	-	None.	-	-

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Mexico

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-aminoethanol	LD50 Oral	Guinea pig	620 mg/kg	-
	LD50 Oral	Mouse	700 mg/kg	-
	LD50 Oral	Rat	1720 mg/kg	-
	LD50 Oral	Rat	1720 mg/kg	-
2-butoxyethanol	LC50 Inhalation Gas.	Rat	450 ppm	4 hours
	LD50 Dermal	Rabbit	220 mg/kg	-
	LD50 Dermal	Rabbit	220 mg/kg	-
	LD50 Oral	Mouse	1230 mg/kg	-
	LD50 Oral	Rabbit	300 mg/kg	-
	LD50 Oral	Rat	250 mg/kg	-
Alcohols, C8-10, ethoxylated propoxylated	LD50 Oral	Rat	470 mg/kg	-
	LD50 Oral	Rat	3800 mg/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

11. Toxicological information

Product/ingredient name	Result	Score	Score	Exposure	Observation
2-aminoethanol	Eyes - Severe irritant	Rabbit	-	250 Micrograms	-
	Skin - Moderate irritant	Rabbit	-	505 milligrams	-
2-butoxyethanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
Alcohols, C8-10, ethoxylated propoxylated	Eyes - Severe irritant	Rabbit	-	24 hours 100 microliters	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
2-aminoethanol	-	-	-	None.	-	-
2-butoxyethanol	A3	3	-	None.	-	-

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Other information

: To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
2-aminoethanol	Acute EC50 8.42 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute LC50 >100000 µg/l Marine water	Crustaceans - Crangon crangon - Adult	48 hours
2-butoxyethanol	Acute LC50 170 mg/l Fresh water	Fish - Carassius auratus	96 hours
	Acute EC50 >1000 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 800000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 1250000 µg/l Marine water	Fish - Menidia beryllina	96 hours

12. Ecological information

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Canada

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
2-aminoethanol	Acute EC50 8.42 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute LC50 >100000 µg/l Marine water	Crustaceans - Crangon crangon - Adult	48 hours
2-butoxyethanol	Acute LC50 170 mg/l Fresh water	Fish - Carassius auratus	96 hours
	Acute EC50 >1000 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 800000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 1250000 µg/l Marine water	Fish - Menidia beryllina	96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Mexico

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
2-aminoethanol	Acute EC50 8.42 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute LC50 >100000 µg/l Marine water	Crustaceans - Crangon crangon - Adult	48 hours
2-butoxyethanol	Acute LC50 170 mg/l Fresh water	Fish - Carassius auratus	96 hours
	Acute EC50 >1000 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 800000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 1250000 µg/l Marine water	Fish - Menidia beryllina	96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations










Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.






13. Disposal considerations

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	2922	Corrosive toxic liquids n.o.s. (2-aminoethanol, 2-butoxyethanol)	8 (6.1)	III	 	-
TDG Classification	2922	Corrosive toxic liquids n.o.s. (2-aminoethanol, 2-butoxyethanol)	8 (6.1)	III	 	<p>Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.40-2.42 (Class 8), 2.26-2.36 (Class 6), 2.7 (Marine pollutant mark).</p> <p>The marine pollutant mark is not required when transported by road or rail.</p>
Mexico Classification	2922	Corrosive toxic liquids n.o.s. (2-butoxyethanol)	8 (6.1)	III	 	-
ADR/RID Class	2922	Corrosive toxic liquids n.o.s. (2-butoxyethanol)	8 (6.1)	III	  	<p>The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.</p> <p>Tunnel code (E)</p>

14. Transport information

IMDG Class	2922	Corrosive toxic liquid n.o.s. (2-butoxyethanol)	8 (6.1)	III	  	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
IATA-DGR Class	2922	Corrosive toxic liquid n.o.s. (2-butoxyethanol)	8 (6.1)	III	 	The environmentally hazardous substance mark may appear if required by other transportation regulations.

PG* : Packing group

15. Regulatory information

United States

HCS Classification : Combustible liquid
Toxic material
Corrosive material
Target organ effects

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
TSCA 8(d) H and S data reporting: 2-butoxyethanol: 1989
All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Fire hazard
Immediate (acute) health hazard
Delayed (chronic) health hazard

Composition/information on ingredients

15. Regulatory information

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
2-aminoethanol	30 - 40	Yes.	No.	No.	Yes.	Yes.
2-butoxyethanol	30 - 40	Yes.	No.	No.	Yes.	Yes.
Alcohols, C8-10, ethoxylated propoxylated	0.1 - 10	No.	No.	No.	Yes.	No.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	2-butoxyethanol	111-76-2	30 - 40
Supplier notification	2-butoxyethanol	111-76-2	30 - 40

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

- Massachusetts** : The following components are listed: 2-aminoethanol; 2-butoxyethanol
- New York** : None of the components are listed.
- New Jersey** : The following components are listed: 2-aminoethanol; 2-butoxyethanol
- Pennsylvania** : The following components are listed: 2-aminoethanol; 2-butoxyethanol
- United States inventory (TSCA 8b)** : All components are listed or exempted.

Canada

- WHMIS (Canada)** : Class D-1A: Material causing immediate and serious toxic effects (Very toxic).
Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).
Class E: Corrosive material

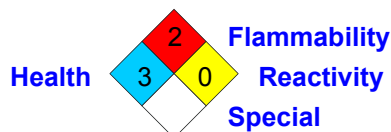
Canadian lists

- Canadian NPRI** : The following components are listed: 2-Butoxyethanol
- CEPA Toxic substances** : The following components are listed: 2-butoxyethanol
- Canada inventory** : All components are listed or exempted.

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.

Mexico

Classification :



International regulations

- International lists** :
- Australia inventory (AICS)**: All components are listed or exempted.
 - China inventory (IECSC)**: All components are listed or exempted.
 - Japan inventory (ENCS)**: All components are listed or exempted.
 - Japan inventory (ISHL)**: Not determined.
 - Korea inventory**: All components are listed or exempted.
 - Malaysia Inventory (EHS Register)**: Not determined.
 - New Zealand Inventory of Chemicals (NZIoC)**: All components are listed or exempted.
 - Philippines inventory (PICCS)**: All components are listed or exempted.

15. Regulatory information

Taiwan Chemical Substances Inventory (TCSI): All components are listed or exempted.

Turkey inventory: Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Label requirements : COMBUSTIBLE LIQUID AND VAPOR. CAUSES RESPIRATORY TRACT, EYE AND SKIN BURNS. HARMFUL IF INHALED, ABSORBED THROUGH SKIN OR SWALLOWED. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

Hazardous Material Information System (U.S.A.) :

Health	3
Flammability	2
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

16. Other information

- References** : -ACGIH, Threshold Limit Values, 1994-1995. -Canada Gazette Part II, Vol. 122, No. 2 Registration SOR/88-64 31 December, 1987 Hazardous Products Act "Ingredient Disclosure List". -CFR29, OSHA's Permissible Exposure Limits, revision July, 1993. -CFR29, part 1910.1200, Hazard Communication. -CHEMTOX database -Components' manufacturer's Material Safety Data Sheet. -CRC Handbook of chemistry and physics, 67 th edition, CRC Press inc., Boca Raton, Florida. -CSST (Comission de Santé et Sécurité au Travail), document #RT-12: Classification of Certain Chemical Substances. -IATA, Dangerous Goods Regulations, 37th edition (January 1, 1996) -NFPA, Fire Protection Guide to Chemical Hazards, 11th edition. -NIOSH, Pocket Guide to Chemical Hazards, revision June 1994. Sigma-Alrich handbook of fine chemicals, 1998 -TSCA (Toxic Substance Contral Act), Chemical Substance Inventory List, 1985.
- Other special considerations** : -ALL COMPONENTS WITH SUSCEPTIBLE HAZARDS THAT ARE PRESENT IN A CONCENTRATION GREATER THAN 1 % (GREATER THAN 0.1 % FOR CARCINOGENS) HAVE BEEN DISCLOSED IN THIS SAFETY DOCUMENT.
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☑ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.