

Material Safety Data Sheet

Canon

1. Product and company identification

Product name : Canon
Material uses : Wax stripper.
Supplier/Manufacturer : V-TO Inc.
2975, Nelson
Saint-Hyacinthe
QC J2S 1Y5
Tél: (450) 774-6849
Fax:(450) 774-4334
Responsible name : Atrion Regulatory Services, Inc.
In case of emergency : CANUTEC (613) 996-6666 (Canada)

2. Hazards identification

Physical state : Liquid. [Clear.]
OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Emergency overview : DANGER!
MAY BE FATAL IF INHALED. CAUSES RESPIRATORY TRACT, EYE AND SKIN BURNS. HARMFUL IF ABSORBED THROUGH SKIN. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.
Very toxic by inhalation. Harmful if absorbed through the skin. Corrosive to the eyes, skin and respiratory system. Causes burns. Do not breathe vapor or mist. Do not get in eyes or on skin or clothing. Contains material that can cause target organ damage. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.
Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.
Potential acute health effects
Inhalation : Very 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 : 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
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: blood, kidneys, liver, lymphatic system, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.
Over-exposure signs/symptoms
Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

2. Hazards identification

- 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-Butoxyethanol	111-76-2	5 - 10
2-Aminoethanol	141-43-5	1 - 5
N-Methyl-2-pyrrolidone	872-50-4	1 - 5

Canada

Name	CAS number	%
2-Butoxyethanol	111-76-2	5 - 10
2-Aminoethanol	141-43-5	1 - 5
N-Methyl-2-pyrrolidone	872-50-4	1 - 5

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. In case of contact, immediately flush eyes with plenty of water for at least 20 minutes. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 20 minutes. Get medical attention immediately.
- Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
- Ingestion** : Do not induce vomiting. 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** : Non-flammable.
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
 - Not suitable** : None known.
- 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.

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. 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. Dilute with water and mop up if water-soluble or 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. 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** : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8 . Exposure controls/personal protection

	United States
Product name 2-Butoxyethanol	Exposure limits ACGIH TLV (United States, 1/2008). TWA: 20 ppm 8 hour(s). NIOSH REL (United States, 12/2001). Absorbed through skin. TWA: 24 mg/m ³ 10 hour(s). TWA: 5 ppm 10 hour(s). OSHA PEL (United States, 11/2006). Absorbed through skin. TWA: 240 mg/m ³ 8 hour(s). TWA: 50 ppm 8 hour(s).
2-Aminoethanol	ACGIH TLV (United States, 1/2008). STEL: 15 mg/m ³ 15 minute(s). STEL: 6 ppm 15 minute(s). TWA: 7.5 mg/m ³ 8 hour(s). TWA: 3 ppm 8 hour(s). NIOSH REL (United States, 12/2001). STEL: 15 mg/m ³ 15 minute(s). STEL: 6 ppm 15 minute(s). TWA: 8 mg/m ³ 10 hour(s). TWA: 3 ppm 10 hour(s). OSHA PEL (United States, 11/2006). TWA: 6 mg/m ³ 8 hour(s). TWA: 3 ppm 8 hour(s).
N-Methyl-2-pyrrolidone	AIHA WEEL (United States, 1/2008). Absorbed through skin. TWA: 10 ppm 8 hour(s).

	Canada
Product name 2-Butoxyethanol	Exposure limits CA Alberta Provincial (Canada, 10/2006). Absorbed through skin. 8 hrs OEL: 97 mg/m ³ 8 hour(s). 8 hrs OEL: 20 ppm 8 hour(s). CA British Columbia Provincial (Canada, 7/2007). TWA: 20 ppm 8 hour(s). CA Ontario Provincial (Canada, 3/2007). Absorbed through skin. TWAEV: 20 ppm 8 hour(s). CA Quebec Provincial (Canada, 12/2006). TWAEV: 20 ppm 8 hour(s). TWAEV: 97 mg/m ³ 8 hour(s).
2-Aminoethanol	CA Alberta Provincial (Canada, 10/2006). 8 hrs OEL: 7.5 mg/m ³ 8 hour(s). 8 hrs OEL: 3 ppm 8 hour(s). 15 min OEL: 15 mg/m ³ 15 minute(s). 15 min OEL: 6 ppm 15 minute(s). CA British Columbia Provincial (Canada, 7/2007). TWA: 3 ppm 8 hour(s). STEL: 6 ppm 15 minute(s). CA Ontario Provincial (Canada, 3/2007). TWAEV: 3 ppm 8 hour(s). TWAEV: 7.5 mg/m ³ 8 hour(s). STEV: 6 ppm 15 minute(s). STEV: 15 mg/m ³ 15 minute(s). CA Quebec Provincial (Canada, 12/2006). TWAEV: 3 ppm 8 hour(s). TWAEV: 7.5 mg/m ³ 8 hour(s). STEV: 6 ppm 15 minute(s). STEV: 15 mg/m ³ 15 minute(s).

8 . Exposure controls/personal protection

N-Methyl-2-pyrrolidone

CA Ontario Provincial (Canada, 3/2007).

TWAEV: 400 mg/m³ 8 hour(s).

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.
- 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.
- 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

- Eyes** : Splash goggles.
- Skin** : Not required under normal conditions of use.
- Respiratory** : A respirator is not needed under normal and intended conditions of product use.
- Hands** : Nitrile gloves.
- Personal protective equipment (Pictograms)** :



HMIS Code/Personal protective equipment : -

- 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.]
- Color** : Yellow.
- pH** : 11.2
- Boiling/condensation point** : Weighted average: 175.86°C (348.5°F)
- Melting/freezing point** : Weighted average: -49.27°C (-56.7°F)
- Specific gravity** : 0.992
- Vapor pressure** : Weighted average: 0.01 kPa (0.08 mm Hg) (at 20°C)
- Vapor density** : Weighted average: 3.58 (Air = 1)
- Evaporation rate** : Weighted average: 0.05 compared with Butyl acetate.
- Viscosity** : Dynamic: 7 mPa·s (7 cP)
- Solubility** : Partially soluble in the following materials: cold water and hot water.

10 . Stability and reactivity

- Stability** : The product is stable.
- Hazardous polymerization** : Under normal conditions of storage and use, hazardous polymerization will not occur.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Conditions of reactivity** :
Not considered to be a product presenting a risk of explosion.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Species	Dose	Result	Exposure
2-Butoxyethanol	Rabbit	220 mg/kg	LD50 Dermal	-
	Rat	917 mg/kg	LD50 Oral	-
	Rat	250 mg/kg	LD50 Oral	-
	Rat	2900 mg/m3	LC50 Inhalation Vapor	7 hours
	Rat	450 ppm	LC50 Inhalation Gas.	4 hours
2-Aminoethanol	Rabbit	1 mL/kg	LD50 Dermal	-
	Rat	1720 mg/kg	LD50 Oral	-
N-Methyl-2-pyrrolidone	Rabbit	8 g/kg	LD50 Dermal	-
	Rat	3914 mg/kg	LD50 Oral	-
Canon	Rat	>3477 mg/kg	LD50 Oral	-

Inhalation : Very 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 : 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.

Carcinogenicity

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
2-Butoxyethanol	A3	3	-	-	-	-

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Species	Exposure	Result
2-Butoxyethanol	Fish	96 hours	Acute LC50 1490000 ug/L
	Fish	96 hours	Acute LC50 1250000 ug/L
	Crustaceans	48 hours	Acute LC50 800000 to 1000000 ug/L
2-Aminoethanol	Fish	96 hours	Acute LC50 150 to 196 mg/L
	Crustaceans	48 hours	Acute LC50 >100000 ug/L

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.









13 . Disposal considerations

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

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

AERG : 154

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN2927	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (2-Butoxyethanol, 2-Aminoethanol, Potassium hydroxide)	8 (6.1)	II	 	-
TDG Classification	UN2927	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (2-Butoxyethanol, 2-Aminoethanol, Potassium hydroxide)	8 (6.1)	II	 	-
IMDG Class	UN2927	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (2-Butoxyethanol, 2-Aminoethanol, Potassium hydroxide)	8 (6.1)	II	 	-
IATA-DGR Class	UN2927	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (2-Butoxyethanol, 2-Aminoethanol, Potassium hydroxide)	8 (6.1)	II	 	-

PG* : Packing group

15 . Regulatory information

United States

HCS Classification : Highly toxic material
Corrosive material
Target organ effects

U.S. Federal regulations : **United States inventory (TSCA 8b)**: All components are listed or exempted.

15 . Regulatory information

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-Butoxyethanol; 2-Aminoethanol; N-Methyl-2-pyrrolidone

SARA 311/312 MSDS distribution - chemical inventory - hazard identification 2-Butoxyethanol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; 2-Aminoethanol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; N-Methyl-2-pyrrolidone: 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

	Product name	CAS number	Concentration
Form R - Reporting requirements	2-Butoxyethanol	111-76-2	5 - 10
	N-Methyl-2-pyrrolidone	872-50-4	1 - 5
Supplier notification	2-Butoxyethanol	111-76-2	5 - 10
	N-Methyl-2-pyrrolidone	872-50-4	1 - 5

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

- Connecticut Carcinogen Reporting:** None of the components are listed.
- Connecticut Hazardous Material Survey:** None of the components are listed.
- Florida substances:** None of the components are listed.
- Illinois Chemical Safety Act:** None of the components are listed.
- Illinois Toxic Substances Disclosure to Employee Act:** None of the components are listed.
- Louisiana Reporting:** None of the components are listed.
- Louisiana Spill:** None of the components are listed.
- Massachusetts Spill:** None of the components are listed.
- Massachusetts Substances:** The following components are listed: 2-Butoxyethanol; 2-Aminoethanol; N-Methyl-2-pyrrolidone
- Michigan Critical Material:** None of the components are listed.
- Minnesota Hazardous Substances:** None of the components are listed.
- New Jersey Hazardous Substances:** The following components are listed: 2-Butoxyethanol; 2-Aminoethanol
- New Jersey Spill:** None of the components are listed.
- New Jersey Toxic Catastrophe Prevention Act:** None of the components are listed.
- New York Acutely Hazardous Substances:** None of the components are listed.
- New York Toxic Chemical Release Reporting:** None of the components are listed.
- Pennsylvania RTK Hazardous Substances:** The following components are listed: 2-Butoxyethanol; 2-Aminoethanol; N-Methyl-2-pyrrolidone
- Rhode Island Hazardous Substances:** None of the components are listed.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
N-Methyl-2-pyrrolidone	No.	Yes.	No.	3200 µg/day (inhalation)

Canada

15 . Regulatory information

- 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 E: Corrosive material



- Canadian lists** : **CEPA Toxic substances:** None of the components are listed.
Canadian ARET: None of the components are listed.
Canadian NPRI: The following components are listed: 2-Butoxyethanol; N-Methyl-2-pyrrolidone
Alberta Designated Substances: None of the components are listed.
Ontario Designated Substances: None of the components are listed.
Quebec Designated Substances: None of the components are listed.

- 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.

International regulations

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

16 . Other information

- Label requirements** : MAY BE FATAL IF INHALED. CAUSES RESPIRATORY TRACT, EYE AND SKIN BURNS. HARMFUL IF ABSORBED THROUGH SKIN. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

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

:

Health	3
Fire hazard	0
Physical Hazard	0
Personal protection	-

HAZARD RATINGS

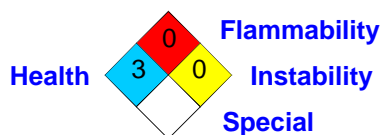
- 4- Extreme
- 3- Serious
- 2- Moderate
- 1- Slight
- 0- Minimal

See section 8 for more detailed information on personal protection.

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

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

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- References** : ANSI Z400.1, MSDS Standard, 2004. - 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.

- Date of issue** : 10/15/2008
Date of previous issue : 09/09/2005

16 . Other information

Version : 3

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.