



Isopropyl Alcohol USP

DIN: 02379066

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Isopropyl Alcohol, 99%

Supplier: Alberta Veterinary Laboratories Inc.
411-19th Street S.E.
Calgary, Alberta T2E6J7
877-456-2755 or 403-456-2245

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Flammable liquid, Target Organ Effect, Irritant

Target Organs

Nerves, Kidney, Cardiovascular system., Gastrointestinal tract, Liver

GHS Classification

Flammable liquids (Category 2)

Skin irritation (Category 3)

Eye irritation (Category 2A)

Specific target organ toxicity – single exposure (Category 3)

GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H225 Highly flammable liquid and vapor.
H316 Causes mild skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P305 + P351 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
+ P338

HMIS Classification

Health hazard: 2
Chronic Health Hazard: *
Flammability: 3
Physical hazards: 0

NFPA Rating

Health hazard: 2
Fire: 3
Reactivity Hazard: 0

Potential Health Effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation. Vapors may cause drowsiness and dizziness.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.
Ingestion	May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: 2-Propanol; sec-Propyl alcohol; Isopropyl alcohol; Isopropanol

Formula: C₃H₈O

Molecular Weight: 60.1 g/mol

<i>CAS-No.</i>	<i>EC-No.</i>	<i>Index-No.</i>	<i>Concentration</i>
2-Propanol 67-63-0	200-661-7	603-117-00-0	-

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

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.

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions. – Carbon oxides

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use explosion-proof equipment. 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. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Handle and store under inert gas. Hygroscopic. Store in a cool, well-ventilated place away from incompatible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
2-Propanol	67-63-0	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Eye & Upper Respiratory Tract irritation Central Nervous System impairment Not classifiable as a human carcinogen			
		STEL	400 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Eye & Upper Respiratory Tract irritation Central Nervous System impairment Not classifiable as a human carcinogen			
		TWA	400 ppm 980 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		STEL	500 ppm 1,225 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	400 ppm 980 mg/m ³	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	The value in mg/m ³ is approximate.			
		TWA	400 ppm 980 mg/m ³	USA. NIOSH Recommended Exposure Limits
		ST	500 ppm 1,225 mg/m ³	USA. NIOSH Recommended Exposure Limits

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

impervious clothing, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	liquid	pH	no data available
Ignition temperature	425 °C (797 °F)	Lower explosion limit	2 %(V)
Upper explosion limit	12.7 %(V)	Relative vapor density	no data available
Water solubility	Completely soluble	Odor	alcohol-like
Odor Threshold	no data available	Evaporation rate	3.0
Boiling point	82 °C (180 °F) – lit.	Flash point – closed cup	12.0 °C (53.6 °F)
Autoignition temperature	425.0 °C (797.0 °F)	Density at 25 °C (77 °F)	0.785 g/cm ³
Partition coefficient: n-octanol/water	log Pow: 0.05	Melting point/range	-89.5 °C (-129.1 °F) – lit.

Vapor pressure: 43.2 hPa (32.4 mmHg) at 20.0 °C (68.0 °F); 58.7 hPa (44.0 mmHg) at 25.0 °C (77.0 °F)

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Vapors may form explosive mixture with air.

Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

Materials to avoid

Oxidizing agents, Acid anhydrides, Aluminium, Halogenated compounds, Acids.

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions – Carbon oxides

Other decomposition products

no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50

LD50 Oral – rat – 5,045 mg/kg

Remarks

Behavioral: Altered sleep time (including change in righting reflex).

Behavioral: Somnolence (general depressed activity).

Inhalation LC50

LC50 Inhalation – rat – 8 h – 16000 ppm

Dermal LD50

LD50 Dermal – rabbit – 12,800 mg/kg

Other information on acute toxicity

no data available

Skin corrosion/irritation

Skin – rabbit – Mild skin irritation

Serious eye damage/eye irritation

Eyes – rabbit – Eye irritation – 24 h

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: 3 – Group 3: Not classifiable as to its carcinogenicity to humans (2-Propanol)

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity**Teratogenicity**

no data available

Specific target organ toxicity – single exposure (Globally Harmonized System)

May cause drowsiness or dizziness.

Specific target organ toxicity – repeated exposure (Globally Harmonized System)

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation. Vapors may cause drowsiness and dizziness.

Ingestion May be harmful if swallowed.

Skin May be harmful if absorbed through skin. Causes skin irritation.

Eyes Causes eye irritation.

Signs and Symptoms of Exposure

Central nervous system depression, prolonged or repeated exposure can cause: Nausea, Headache, Vomiting, narcosis, Drowsiness. Overexposure may cause mild, reversible liver effects.

Synergistic effects

no data available

Additional Information

RTECS: NT8050000

12. ECOLOGICAL INFORMATION**Bioaccumulative potential**

no data available

PBT and vPvB assessment

no data available

Persistence and degradability

no data available

Toxicity

Toxicity to fish LC50 – Pimephales promelas (fathead minnow) – 9,640.00 mg/l – 96 h

Toxicity to daphnia and other aquatic invertebrates

EC50 – Daphnia magna (Water flea) – 5,102.00 mg/l – 24 h

Immobilization EC50 – Daphnia magna (Water flea) – 6,851 mg/l – 24 h

Toxicity to algae EC50 – Desmodesmus subspicatus (green algae) – > 2,000.00 mg/l – 72 h

EC50 – Algae – > 1,000.00 mg/l – 24 h

Mobility in soil

no data available

Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS**Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. 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.

14. TRANSPORT INFORMATION**DOT (US)**

UN number: 1219 Class: 3 Packing group: II

Proper shipping name: Isopropanol

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN number: 1219 Class: 3 Packing group: II

Proper shipping name: ISOPROPANOL

Marine pollutant: No

EMS-No: F-E, S-D

IATA

UN number: 1219 Class: 3 Packing group: II
Proper shipping name: Isopropanol

15. REGULATORY INFORMATION**OSHA Hazards**

Flammable liquid, Target Organ Effect, Irritant

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

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SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

2-Propanol CAS-No.: 67-63-0

Pennsylvania Right To Know Components

2-Propanol CAS-No.: 67-63-0

New Jersey Right To Know Components

2-Propanol CAS-No.: 67-63-0

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be complete and should be used only as a guide. The burden of safe use of this material rests entirely with the user.

3/29/2012