



Revision date:3/2015

Version:1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name/designation:	High Purity Isopropyl Alcohol, Isopropanol
Product No.:	89370-086
Other means of identification: Isopropanol, Isopropyl Alcohol, 2-Propanol, sec-propyl alcohol, dimethylcarbinol, Rubbing alcohol, IPA 99%	

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: General use organic solvent

1.3. Details of the supplier of the safety data sheet

Company VWR International, LLC
Radnor Corporate Center
100 Matsonford Road
Radnor, PA 19087-8660
Telephone 610.386.1700

1.4. Emergency Telephone number

CHEMTREC 800.424.9300
CANUTEC 613.996.6666

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Hazard classes and hazard categories	Hazard statements
Eye Irritation (Category 2)	Causes serious eye damage
Flammable Liquids (Category 2)	Highly flammable liquid and vapor
Specific Target Organ Toxicity – single exposure (Category 3)	May cause drowsiness and dizziness

2.2. GHS Label elements, including precautionary statements



Signal word: DANGER!

Hazard statements	
H225	Highly flammable liquid and vapor
H319	Causes serious eye damage
H336	May cause drowsiness and dizziness

Precautionary statements	
P261	Avoid breathing dust/fumes/gas/mist/vapors
P312	Call a POISON CENTER or doctor/physician if you feel unwell
P501	Dispose of contents and container to an approved waste disposal
P240	Ground/bond container and receiving equipment
P337+P313	If eye irritation persists: Get medical attention
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P303+P361+P353	IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water.
P370+P378	In case of fire: Use dry sand, dry chemical, or alcohol-resistant foam for extinction.
P210	Keep away from heat, sparks, open flames and hot surfaces. No smoking.
P233	Keep container tightly closed.
P102	Keep container tightly closed.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up
P243	Take precautionary measures against static discharge
P241	Use explosion-proof electrical, ventilating and lighting equipment
P242	Use only non-sparking tools



P271	Use only outdoors or in a well-ventilated area
P264	Wash hands thoroughly after handling
P280	Wear protective gloves and eye and face protection

2.3. WHIMS Classification: B-2: Flammable Liquid, D-2B: Toxic (Eye Irritant).

2.4. Hazards not otherwise classified (HNOC) or not covered by GHS or WHIMS

Potential Health Effects:

Eyes: Can cause irritation to the eyes

Ingestion: Can be harmful if ingested.

Inhalation: Can be harmful if inhaled. Can cause respiratory tract irritation. Vapors may cause drowsiness or dizziness

Skin: Can cause irritation if absorbed through skin.

SECTION 3: Composition / information on ingredients

3.1. Hazard components

Chemical name	Formula	Molecular weight	CAS#	Volume%
Isopropyl Alcohol	C ₃ H ₈ O	60.1 g/mol	67-63-0	100

SECTION 4: First aid measures

4.1. General information

Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

In case of inhalation: Remove person to fresh air. If signs/symptoms continue, get medical attention. Give oxygen or artificial respiration as needed.

In case of skin contact: Immediately flush affected area with plenty of water while removing contaminated clothing. Wash contaminated clothing before reuse. Contact a doctor. If irritation persists, get medical attention.

In case of eye contact: Immediately flush affected area with plenty of water while removing contaminated clothing. Wash contaminated clothing before reuse. Contact a doctor. If irritation persists, get medical attention.

In case of ingestion: NEVER give anything by mouth to an unconscious person. If vomiting does occur, have victim lean forward to prevent aspiration. Rinse mouth with water. Immediately have victim drink several glasses of water to dilute. Seek medical attention.

4.2. Most important symptoms and effects, both acute and delayed

See Potential Health Effects above.

4.3. Indication of any immediate medical attention and special treatment needed

Not Established

SECTION 5: Firefighting measures

5.1. Extinguishing media: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide

5.2. Special hazards arising from the substance or mixture: Vapors may travel to source of ignition and flash back.

5.3. Special protective equipment for firefighters: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Keep unopened containers cool by spraying with water.

5.4. Hazardous combustion products: Carbon oxides expected to be the primary hazardous combustion product.

5.5. Advice for firefighters

5.6. Additional information

OSHA/NFPA Class IB Flammable Liquid

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures: Do not inhale 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.

6.2. Environmental precautions: Stop leak. Contain spill if possible and safe to do so. Prevent product from entering drains.

6.3. Methods and material for containment and cleaning up: Contain spill, then collect with an electrically protected vacuum cleaner or by wet-brushing and put material into a convenient waste disposal container. Keep container closed.



6.4. Additional information

SECTION 7: Handling and storage

7.1. Precautions for safe handling: Do not get on skin or in eyes. Do not inhale vapors or mist. Keep away from sources of ignition- no smoking. Take measures to prevent buildup of electrostatic charge.

7.2. Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a cool, dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

7.3. Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Chemical Name	Limit value type & Country of Origin	Exposure Limit value	Source
Isopropyl Alcohol	TWA (US)	400 ppm	OSHA
	TWA (US)	200 ppm	ACGIH
	STEL (US)	400 PPM	ACGIH

8.2. Exposure controls

Appropriate engineering controls: General room or local exhaust ventilation is usually required to meet exposure limits. Electrical equipment should be grounded and conform to applicable electrical code.

Personal protection equipment: Wear impervious, flame retardant, antistatic protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye/face protection: Use chemical safety goggles and/or a full face shield where splashing is possible. Use equipment approved by appropriate government standards, such as NIOSH (US) or EN166 (EU). Maintain eye wash fountain and quick-drench facilities in work area.

Skin 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.

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 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).

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

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

- a) Appearance:
Physical state: Liquid
Color: Colorless
- b) Odor: Sharp, rubbing alcohol odor
- c) Odor Threshold: Specific data not available
- d) pH: Specific data not available
- e) Melting point/freezing point: -90°C (-130°F)
- f) Initial boiling point: 83°C (181°F)
and boiling range
- g) Flash point: 12°C (53°F) – Closed cup
- h) Evaporation rate: Specific data not available, expected to be rapid
- i) Flammability (solid, gas) Flammable
- j) Upper/lower flammability 12.7% (V)/2.0% (V)
or explosive limits
- k) Vapor pressure: 4.4 kPa at 20°C (68°F)
- l) Vapor density: 1.05 where air =1 at 20°C (68°F)
- m) Relative density: 0.858 g/cm³ at 25°C (77°F)
- n) Solubilities: Miscible
- o) Partition coefficient (n-Octanol/Water): Log Pow: 0.05
- p) Auto-ignition temperature: 399°C (750°F)
- q) Decomposition temperature: Specific data not available
- r) Viscosity: Specific data not available

- s) Explosive properties: Specific data not available
- t) Oxidizing properties: Specific data not available

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity: Not reactive under normal conditions of use.

10.2. Chemical stability: Stable under recommended storage conditions

10.3. Possibility of hazardous reactions: Vapors may form explosive mixture with air.

10.4. Conditions to avoid: Heat flames and spark. Extreme temperatures and sunlight.

10.5. Incompatible materials: Oxidizing agents, Acid anhydrides, Aluminum, Halogenated compounds, Acids.

10.6. Hazardous decomposition products: Carbon oxides are expected to be, under fire conditions, the primary hazardous decomposition products.

SECTION 11: Toxicology

11.1. Information on toxicological effects

Acute toxicity

Oral LD₅₀ Rat 5,045 mg/kg Behavioral abnormalities observed such as altered sleep time and decreased activity.

Inhalation LC₅₀ Rat 16,000 mg/kg 8 hours

Dermal LD₅₀ Rabbit 12,800 mg/kg

Other information on acute toxicity

Skin corrosion/irritation

Rabbit – mild skin irritation

Serious eye damage/eye irritation

Mildly irritating to the eye at an airborne concentration of 400 ppm, unpleasant at 800 ppm

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: Group 3: Not classifiable as to its carcinogenicity to humans.

ACGIH: No component of this product present at levels greater than or equal to 0.1%

is identified as a carcinogen or potential carcinogen by ACGIH.

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

No data available to designate the product as toxic to reproductive system.

Specific target organ toxicity-single exposure

Inhalation – May cause drowsiness or dizziness – central nervous system

Specific target organ toxicity-repeated exposure

No data available to designate the product as causing specific target organ toxicity through repeated exposure.

Aspiration hazard

No data available to designate product as an aspiration hazard.

Additional information

Long term exposure (2 years) to Isopropyl Alcohol via inhalation at concentrations up to 5000 ppm caused to exposure related increases in tumors in animals. No data available for the teratogenic toxicity of this product.

Eyes: Produces irritation, characterized by a burning sensation, redness, tearing, inflammation, and possible corneal injury. May cause transient corneal injury.

Ingestion: Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause kidney damage. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure.

Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. May cause narcotic effects in high concentration. Causes upper respiratory tract irritation. Inhalation of vapors may cause drowsiness and dizziness. Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal. The probable oral lethal dose in humans is 240 ml (2696 mg/kg), but ingestion of only 20 ml (224 mg/kg) has caused poisoning.

Skin: May cause irritation with pain and stinging, especially if the skin is abraded. Isopropanol has a low potential to cause allergic skin reactions; however, rare cases of allergic contact dermatitis have been reported. May be absorbed through intact skin. Dermal absorption has been considered toxicologically insignificant.

Chronic: Prolonged exposure can be irritating to mucous membranes, skin, and the respiratory system. Can cause liver and kidney damage.

SECTION 12: Ecological information

12.1. Ecotoxicity

Acute Fish Toxicity (ISOPROPANOL)

LD50 / 96 hours Pimephales promelas: 9,640 mg/L

Toxic to Daphnia and Other Aquatic Invertebrates

EC50 / 24 h / Water Flea – 5,102 mg/L

Toxicity to Aquatic Plants (ISOPROPANOL)

EC50 / 72 hours Desmodemus subspicatus > 2,000 mg/L

Toxicity to Daphnia and other aquatic invertebrates

Immobilization EC50 / 24 h / Water Flea - 6,851 mg/L

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. Results of PBT and vPvB assessment

No data available

12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

SECTION 14: Transport information

Land Transport DOT (U.S.)

UN Number: 1219

Proper Shipping name Isopropanol

Transport Hazard Classes

Class: 3

Hazard Label(s) Flammable liquid

Packing Group: II

Environmental hazard(s) No

Special precautions for user

Sea Transport IMDG

UN Number: 1219
Proper Shipping name Isopropanol
Transport Hazard Classes
Class: 3
Hazard Label(s) Flammable liquid
EMS- No. F-E, S-D
Packing Group: II
Environmental hazard(s) No
Segregation Group
Special precautions for user

Air Transport IATA

UN Number: 1219
Proper Shipping name: Isopropanol
Transport Hazard Classes
Class: 3
Hazard Label(s) Flammable liquid
Packing Group: II
Environmental hazard(s)
Special precautions for user

SECTION 15: Regulatory information

OSHA Hazards

Flammable liquid, Target Organ Effect, Irritant

SARA 302 Extremely Hazardous Substances

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

SARA 313 (TRI reporting)

The following components are subject to reporting levels established by SARA Title III, Section 313: ISOPROPYL ALCOHOL (CAS# 67-63-0) Revision date: 1987-01-01

SARA 311/312 Hazards

Acute Health Hazard
Chronic Health Hazard
Fire Hazard

Massachusetts Right-To-Know Substance List

Isopropyl Alcohol CAS-No. 67-63-0 Revision Date 1987-01-01

Pennsylvania Right-To-Know Hazardous substances

Isopropyl Alcohol CAS-No. 67-63-0 Revision Date 1987-01-01

New Jersey Worker and Community Right-To-Know Components

Isopropyl Alcohol CAS-No. 67-63-0 Revision Date 1987-01-01

California Proposition 65

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

CERCLA

No chemicals in this material with known CAS numbers are subject to the reporting requirements of CERCLA

Inventory status:

Canada DSL/NDSL Inventory List: Listed

US TSCA Inventory List: Listed

EINECS, ELINCS or NLP: Listed

SECTION 16: Other information

Canadian Carcinogenicity hazard class: Not classified

PHNOC hazard class: Not classified

HHNOC hazard class: Not classified

Biohazardous Infectious Materials hazard class: Not classified

NFPA Rating:

Health: 1

Flammability: 3

Reactivity: 0

Special Hazard:



DISCLAIMER

The above information is believed to be correct but does not purport to be all-inclusive and shall



be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. VWR International and its Affiliates shall not be held liable for any damage resulting from handling.