

Revision date: Mar-5-2015

Version: 1

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

1.1. Product identifier

Trade name/designation:	Isopropanol
Product No.:	BDH2014, 2030,
Other means of identification:	IPA, Isopropyl Alcohol, Rubbing Alcohol, 70% Isopropyl Alcohol, 2-Propanol, Dimethyl carbinol, 70% IPA, IPA 70%

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

Recommended Use No information available

Uses advised against No information available

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 613.992.4624

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

For the full text of the H-Statement(s) and R-phrase(s) mentioned in this Section, see Section 16.

Hazard classes and hazard categories	Hazard statements
Category 2A	Eye irritation
Category 3	Specific target organ toxicity (single exposure)
Category 2	Flammable Liquids

2.2. GHS Label elements, including precautionary statements

Symbol(s)

Xi - Irritant
F - Highly flammable

R-code(s)

R11, Xi;R36, R66, R67

Pictograms



Signal word

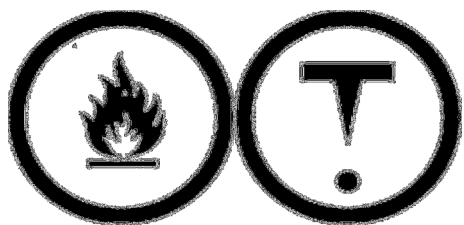
DANGER

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

Precautionary	
P210	Keep away from heat, hot surfaces, sparks, open flames and other sources of ignition. No smoking
P233	Keep container tightly closed.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray
P264	Wash skin thoroughly after handling.
P271	Use only outdoors, or in a well-ventilated area.
P280	Wear protective gloves/eye protection/face protection
P501	Dispose of contents/container in accordance with local, state, and federal regulations

2.3. WHIMS Classification

B2 Flammable liquid
D2B Toxic materials



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

None especially mentioned.

SECTION 3: Composition / information on ingredients

3.1. Hazard components

Chemical name	Formula	Molecular weight	CAS#	Weight%
Isopropanol	C ₃ H ₈ O	60.1	67-63-0	68-72%
Water	H ₂ O	18.01	7732-18-5	28-32

SECTION 4: First aid measures

4.1. General information

In case of inhalation move the exposed person to fresh air at once and keep at rest in a position comfortable for breathing. If breathing is difficult administer Oxygen, or give artificial respiration (if trained)

Get medical attention immediately

In case of skin contact remove victim from source of contamination. Promptly flush contaminated skin with soap and water for at least 15 minutes. Promptly remove clothing if soaked through and flush skin with water. Seek medical attention if irritation persists.

In case of eye contact wash eyes immediately with plenty of water for at least 15 minutes while lifting upper and lower eyelids. Get medical attention immediately.

In case of ingestion never make an unconscious person vomit or drink fluids. Rinse the mouth and spit the fluids out. Slowly drink 1-2 glasses of water. Do not induce vomiting. Get medical attention immediately.

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

Burning sensation in Eyes, Nose, Throat, Temporary reddening of skin, Headache, Drowsiness, Dazed feeling

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Use CO₂, dry chemical, or alcohol-resistant foam If using water or foam, prevent product and runoff from entering drains, sewers or surface water due to high toxicity to aquatic organisms

Extinguishing media which shall not be used for safety reasons

High volume water jet

5.2. Special hazards arising from the substance or mixture

Special Hazard

None

5.3. Special protective equipment for firefighters

As in any fire, wear self-contained breathing apparatus and full protective gear

5.4. Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO₂), peroxides

5.5. Advice for firefighters

5.6. Additional information

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition Evacuate personnel to safe areas. Ensure adequate ventilation. Use personal protective equipment. Keep people away from and upwind of spill/leak. See Section 12 for additional Ecological Information.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains Do not flush into surface water or sanitary sewer system

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust)

6.4. Additional information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Ensure adequate ventilation Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Use only in an area containing flame proof equipment. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Use only in area provided with appropriate exhaust ventilation. Wear personal protective equipment. Do not breathe vapors or spray mist

7.2. Conditions for safe storage, including any incompatibilities

Keep tightly closed in a dry and cool place. Keep in properly labeled containers. Keep containers tightly closed in a cool, well-ventilated place. Containers must be stored in an upright position.

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
Isopropanol (67-63-0)	TWA-USA	200 ppm	ACGIH
Isopropanol (67-63-0)	STEL-USA	400 ppm	ACGIH
Isopropanol (67-63-0)	TWA-USA	400 ppm/980 mg/m ³	NIOSH REL

8.2. Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas

Personal protection equipment

Eye/face protection

Tightly fitting safety goggles

Skin protection

Protective gloves and antistatic boots. Wear fire/ flame resistant/ retardant clothing impervious gloves. Long sleeved clothing apron.

Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn

Hygiene measures

When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

- a) **Appearance:**
Physical state: Liquid
Color: Colorless
- b) **Odor:** alcohol like
- c) **Odor Threshold:** No information available
- d) **pH:** No information available
- e) **Melting point/freezing point:** No information available/ -90°C /-130 °F
- f) **Initial boiling point and boiling range:** 82°C / 180°F (99% Isopropyl Alcohol)
- g) **Flash point:** 18.3 °C / 64.9 °F (Closed Cup)
- h) **Evaporation rate:** No information available
- i) **Flammability (solid, gas):** Flammable
- j) **Upper/lower flammability or explosive limits:** 12.7% (V)/2.0% (V) (99% Isopropyl Alcohol)
- k) **Vapor pressure:** 32.4 mmHg @ 20°C/68°F
- l) **Vapor density:** 2.0 @ 20°C/68°F (99% Isopropyl Alcohol)
- m) **Relative density:** 0.79 g/cm³ @ 20°C/68°F
- n) **Solubilities:** Miscible
- o) **Partition coefficient (n-Octanol/Water):** log Pow: 0.05 @ 25°C/77°F
- p) **Auto-ignition temperature:** 399°C / 750.2°F (99% Isopropyl Alcohol)
- q) **Decomposition temperature:** No information available
- r) **Viscosity:** No information available
- s) **Explosive properties:** No information available
- t) **Oxidizing properties:** No information available

9.2. Other information

Softening point: No information available

Molecular weight: 99% Isopropyl Alcohol: 60.1 g/mol / Water: 18.01 g/mol

VOC Content (%): No information available

Density VALUE: No information available

Bulk Density VALUE: No information available

10.1. Reactivity

No dangerous reaction known under conditions of normal use

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

Vapors may form explosive mixtures with air

10.4. Conditions to avoid

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

10.5. Incompatible materials

Strong oxidizing agents Incompatible with strong acids and bases, aldehydes, isocyanates, chlorine, halogens, ethylene oxide

10.6. Hazardous decomposition products

Fire or mixing with incompatible materials may produce oxides of carbon and other toxic or irritating fumes.

SECTION 11: Toxicology

11.1. Information on toxicological effects

Acute toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity

Oral LD₅₀: (99% Isopropyl Alcohol)

5,800.00 mg/kg (RAT)

Inhalation LC₅₀: (99% Isopropyl Alcohol)

Vapor: >10,000 ppm 6 hours (RAT)

Dermal LD₅₀: (99% Isopropyl Alcohol)

12,800 mg/kg (Rabbit)

Other information on acute toxicity

Skin corrosion/irritation

May cause skin irritation in susceptible persons

Serious eye damage/eye irritation

Causes eye irritation.

Respiratory or skin sensitization

Inhalation of vapors in high concentration may cause irritation of respiratory system. Exposure to high concentrations has a narcotic effect, producing symptoms of dizziness, drowsiness, headache, staggering, and unconsciousness.

Germ cell mutagenicity (99% Isopropyl Alcohol)

Test Type: Mammalian cell gene mutation assay

Test Species: Chinese hamster ovary (CHO)

Metabolic activation: with and without activation

Method: OECD Test Guideline 475

Result: Negative

Carcinogenicity

This product does NOT contain a substance which is classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

Reproductive toxicity

Does not show teratogenic effects in animal experiments.

Specific target organ toxicity-single exposure

Central nervous system

Specific target organ toxicity-repeated exposure

No information

Aspiration hazard

No information

Additional information

Inhalation of vapors may cause drowsiness or dizziness

SECTION 12: Ecological information

12.1. Ecotoxicity

Components of this product have been identified as having potential environmental concerns.

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Isopropanol	No Data Available	9,640 mg/l: 96 h Oncorhynchus mykiss	5,012 mg/l: 48 h Daphnia magna mg/L EC50 Static Test

12.2. Persistence and degradability

No information available

12.3. Bioaccumulative potential

Chemical name	log Pow @ 25°C
Isopropanol	0.05

12.4. Mobility in soil

No information available

12.5. Results of PBT and vPvB assessment

No information available

12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues / unused products:

Dispose of in accordance with local, state, and federal regulations

Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal.

Other information: According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal.

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 3

Packing Group: II

Environmental hazard(s): Marine Pollutant: No

Special precautions for user: None Especially Mentioned

Sea Transport IMDG

UN Number: 1219

Proper Shipping name: ISOPROPANOL

Transport Hazard Classes

Class: 3

Hazard Label(s): Flammable 3

Packing Group: II

Environmental hazard(s): Marine Pollutant: No

Segregation Group: EMS- No.: F-E, S-D
Special precautions for user: None Especially Mentioned

Air Transport IATA

UN Number: 1219
Proper Shipping name: Isopropanol
Transport Hazard Classes
Class: 3
Hazard Label(s): Flammable 3
Packing Group: II
Environmental hazard(s): Marine Pollutant: No
Special precautions for user: None Especially Mentioned

SECTION 15: Regulatory information

OSHA Hazards

Flammable liquid, Moderate eye 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)

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

SARA 311/312 Hazardous Chemicals

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Massachusetts Right-To-Know Substance List

Listed as: Isopropyl alcohol

Pennsylvania Right-To-Know Hazardous Substances

Listed as: Isopropyl alcohol

New Jersey Worker and Community Right-To-Know Components

Listed as: Isopropyl alcohol

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

Inventory status:

Canada DSL/NDSL Inventory List
US TSCA Inventory List

SECTION 16: Other information

Full text of H-Statement(s) and R-phrase(s)

R11 - Highly flammable
R36 - Irritating to eyes
R66 – Repeated exposure may cause skin dryness or cracking
R67 - Vapors may cause drowsiness and dizziness
H225 - Highly flammable liquid and vapor
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness

Canadian Carcinogenicity hazard class

PHNOC hazard class: No information

HHNOC hazard class: No information

Bio-hazardous Infectious Materials hazard class: No information

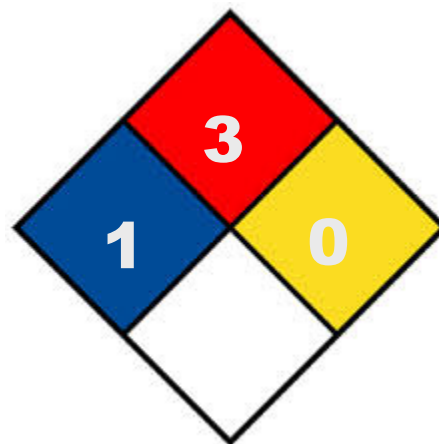
NFPA Rating:

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.