

Revision date: Jan-26-2015

Version: 1

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

### 1.1. Product identifier

|                                                                                                                                    |                     |
|------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Trade name/designation:                                                                                                            | Isopropanol         |
| Product No.:                                                                                                                       | BDH2016, 2027, 2032 |
| Other means of identification: IPA, Isopropyl Alcohol, Isopropanol Anhydrous, 99% Isopropyl Alcohol, 2-Propanol, Dimethyl carbinol |                     |

### 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

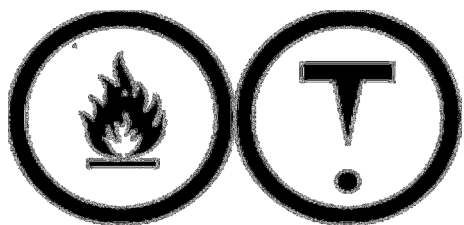
| Hazard statements |                                   |
|-------------------|-----------------------------------|
| H225              | Highly flammable liquid and vapor |
| H319              | Causes serious eye irritation     |
| H336              | May cause drowsiness or dizziness |

| 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 <sub>3</sub> H <sub>8</sub> O | 60.1             | 67-63-0 | 100     |

## 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 CO<sub>2</sub>, 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 (CO<sub>2</sub>), 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 <sup>3</sup> | 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:** 200 ppm
- d) **pH:** No data available
- e) **Melting point/freezing point:** No information available/ -88°C / -126 °F
- f) **Initial boiling point and boiling range:** 82°C / 180°F
- g) **Flash point:** 12 °C / 54 °F (Closed Cup)
- h) **Evaporation rate:** 1.2 (n-Butyl Acetate)
- i) **Flammability (solid, gas)** : No information available
- j) **Upper/lower flammability or explosive limits:** 12.7% (V)/2.0% (V)
- k) **Vapor pressure:** 32 mmHg @ 20°C/68°F
- l) **Vapor density:** 2.0 @ 20°C/68°F
- m) **Relative density:** 0.79 g/cm<sup>3</sup> @ 20°C/68°F
- n) **Solubilities:** Completely miscible
- o) **Partition coefficient (n-Octanol/Water):** log Pow: 0.05 @ 25°C/77°F
- p) **Auto-ignition temperature:** 399°C / 750.2°F
- q) **Decomposition temperature:** No information available
- r) **Viscosity:** 2.4 MPas @ 20°C/68°F
- s) **Explosive properties:** No information available
- t) **Oxidizing properties:** No information available

### 9.2. Other information

**Softening point:** No information available

**Molecular weight:** 60.1 g/mol

**VOC Content (%):** No information available

**Density VALUE:** No information available

**Bulk Density VALUE:** No information available

## SECTION 10: Stability and reactivity

### 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 LD<sub>50</sub>:

5,800.00 mg/kg (RAT)

#### Inhalation LC<sub>50</sub>:

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

#### Dermal LD<sub>50</sub>:

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

**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-phrases

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

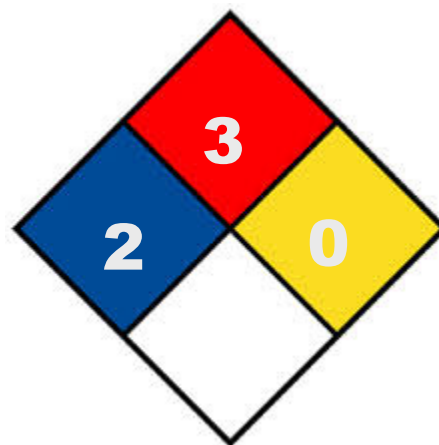
### NFPA Rating:

Health: 2

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.