

Safety Data Sheet

Isopropanol



SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

1.1 Product Identifier

Trade Name : Isopropanol
Product Number : 3803660; 3803660E
SDS Date : September 23, 2015

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Product Use : For use in all histological and cytological procedures.
Uses Advised Against : All other uses.

1.3 Details of the Supplier of the Substance or Mixture

Manufacturer/Preparer : Leica Biosystems Richmond, Inc
5205 Route 12
Richmond, IL 60071
800-225-3035
LBSNA-LBS-QA@LEICABIOSYSTEMS.COM

1.4 Emergency Telephone Number

Emergency Spill : 1-800-424-9300 (ChemTrec)
+1 703-527-3887 International calls (call collect)
13 11 26 (Australia 24 Hr Poisons Information Centre)
Other Information : 1-800-225-3035

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

CLP/GHS Classification (1272/2008) :

Physical:	Health:	Environmental:
Flammable Liquid – Category 2	Eye Irritant – Category 2A Specific Target Organ Toxicity (Single Exposure) – Category 3	Not Hazardous

2.2 Label Elements

Hazard Pictograms :  

Signal Word : DANGER!

Hazard Statements	:	H225	Highly flammable liquid and vapour.
		H319	Causes serious eye irritation.
		H336	May cause drowsiness or dizziness.
Precautionary Statements	:	P210	Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
		P233	Keep container tightly closed.
		P235	Keep cool.
		P240	Ground and bond container and receiving equipment.
		P241	Use explosion-proof electrical/ventilating/lighting equipment.
		P242	Use only non-sparking tools.
		P243	Take action to prevent static discharges.
		P261	Avoid breathing mist/vapours/spray.
		P271	Use only outdoors or in a well-ventilated area.
		P280	Wear protective gloves/protective clothing/eye protection/face protection.
		P303+361+353	IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water.
		P304+340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
		P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		P312	Call a POISON CENTER or doctor/physician if you feel unwell.
		P337+313	If eye irritation persists: Get medical advice/attention.
		P370+378	In case of fire: Use dry chemical, alcohol foam, or water spray for extinction.
		P403+235	Store in a well-ventilated area. Keep cool.
		P405	Store locked up.
		P501	Dispose of contents/container in accordance with all local/regional/national/international regulations.

2.3 Other Hazards

Other hazards which do not result in classifications : None known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number / EINECS Number / REACH Reg. Number	% (w/w)	CLP/GHS Classification (1272/2008)
Isopropanol	67-63-0 200-661-7	≤100	Flammable Liquid Category 2 (H225) Eye Irritation Category 2A (H319) Specific Target Organ Toxicity (Single Exposure) Category 3 (H336)

See Section 16 for full text of GHS and EU Classifications.

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 20 minutes, occasionally lifting upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 20 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly.

- after handling. Get medical attention immediately.
- Inhalation** : Call medical doctor or poison control center immediately. Move exposed person to fresh air. If not breathing, if breathing is irregular, or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing, such as a collar, tie, belt, or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

See Section 11 for more detailed information on health effects.

4.2 Most important symptoms and effects, both acute and delayed

- Eye contact** : May cause eye irritation.
- Skin contact** : May cause skin irritation.
- Inhalation** : May cause respiratory tract irritation.
- Ingestion** : Harmful if swallowed.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Immediate medical treatment is required for ingestion.
- Specific treatments** : No specific treatment.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing Media

- Suitable extinguishing media** : Use dry chemical, alcohol foam, carbon dioxide (CO₂), or water spray.
- Unsuitable extinguishing media** : None known.

5.2 Special hazards arising from the substance or mixture

- Unusual fire and explosion hazards** : Highly flammable liquid and vapor. Vapors are heavier in the air and will travel along surfaces to remove ignition sources and flash back. Vapors will collect in low areas. Vapors may be ignited by static sparks. Flames may be invisible in daylight.
- Combustion products** : Oxides of carbon; smoke.

5.3 Advice for fire-fighters

- Special protective equipment for fire-fighters** : Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals.
- Special protective action for fire-fighters** : Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures

- For emergency responders** : Wear appropriate protective equipment. Eliminate all ignition sources and ventilate the area with explosion-proof equipment. Do not touch or walk through spilled material.

6.2 Environmental precautions

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Environmental precautions : Prevent entry in storm sewers and waterways. Report spill as required by local and federal regulations.

6.3 Methods and materials for containment and cleaning up

For small & large spill : Stop spill at the source if it is safe to do so. Absorb with an inert material. Use non-sparking tools and equipment. Collect into a suitable container for disposal.

6.4 Reference to other sections

Refer to Section 8 for personal protective equipment, and Section 13 for disposal information.

SECTION 7: HANDLING and STORAGE

7.1 Precautions for safe handling

Protective measures : Prevent eye and skin contact. Do not breathe vapors or mists. Use only with adequate ventilation. Wash thoroughly after handling. Remove contaminated clothing and laundry before reuse. Keep containers closed when not in use.

7.2 Conditions for safe storage, including any incompatibilities

Keep product away from heat, sparks, and all other sources of ignition. Electrically bond and ground transfer equipment. Use appropriately rated electrical equipment in areas where this material is handled and stored. Protect containers from physical damage. Store in a cool area. Keep away from excessive heat and open flames. Keep containers closed when not in use. Store away from oxidizers. Empty containers retain product residues. Do not cut, weld, braze, etc. on or near empty containers. Follow all SDS precautions in handling empty containers.

7.3 Specific end use(s)

Industrial uses : None identified.
Professional uses : For use in all histological and cytological procedures.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Chemical Name	US OEL	EU IOEL	UK OEL	Germany OEL
Isopropanol	40 ppm OSHA PEL 200 ppm TWA ACGIH TLV 400 ppm STEL	None established	400 ppm TWA 500 ppm STEL	200 ppm TWA

Refer to local or national authority for exposure limits not listed above.

Chemical Name	Biological Limit Value
Isopropanol	Acetone in urine 40 mg/L, end of shift end of workweek (ACGIH)

8.2 Exposure controls

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Recommended monitoring procedure	:	Collection on charcoal tubes with analysis by gas chromatography.
Appropriate engineering controls	:	Use with adequate local exhaust ventilation to maintain exposure levels below the occupational exposure limits.
Personal protective measures		
Eye/face protection	:	Wear safety glasses or chemical goggles.
Skin protection	:	Impervious clothing as needed to avoid skin contact.
Hands	:	Impervious gloves recommended (butyl rubber).
Respiratory protection	:	None needed with adequate ventilation. If the occupational exposure limit is exceeded, use an approved organic vapor respirator. Selection of respiratory protection depends on the contaminant type, form, and concentration. Select in accordance with OSHA 1910.134 or other applicable regulations and good industrial hygiene practice.
Other protection	:	Suitable washing facilities should be available.

SECTION 9: PHYSICAL and CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	:	Colorless liquid
Odor	:	Alcohol
Odor threshold	:	Not applicable
pH	:	Not available
Melting/freezing point	:	Not available
Boiling point	:	Not available
Flash point	:	53°F (11°C)
Lower flammability limit	:	Not available
Upper flammability limit	:	Not available
Evaporation rate	:	Not available
Vapor density (air = 1)	:	Not available
Vapor pressure	:	Not available
Specific gravity (H₂O = 1)	:	0.79
Relative density	:	0.79
Solubility	:	Complete
Octanol/water partition coefficient	:	Not available
Autoignition temperature	:	Not available
Decomposition temperature	:	Not available
Viscosity	:	Not available
Explosive properties	:	Vapors may be explosive in confined areas
Oxidizing properties	:	None
Molecular formula	:	Not available
Molecular weight	:	Not available

9.2 Other information

No additional information available

SECTION 10: STABILITY and REACTIVITY

10.1 Reactivity	:	This material is not reactive under normal conditions.
10.2 Chemical stability	:	Normally stable.

- 10.3 Possibility of hazardous reactions** : Reaction with strong oxidizers will generate heat and cause fire.
- 10.4 Conditions to avoid** : Avoid excessive heat, sparks, flames, and all other ignition sources.
- 10.5 Incompatible materials** : Oxidizing agents, strong acids, and bases.
- 10.6 Hazardous decomposition products** : Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: oxides of carbon.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Potential health effects:

- Eye contact** : May cause severe irritation with redness, tearing, and swelling.
- Skin contact** : May cause irritation and dryness.
- Inhalation** : May cause respiratory tract irritation and central nervous system effects, such as dizziness, drowsiness, and unconsciousness.
- Ingestion** : Swallowing may cause gastrointestinal irritation, nausea, vomiting, and diarrhea. May cause central nervous system effects, including dizziness, drowsiness, nausea, vomiting, and unconsciousness.

Acute toxicity:

Product/ingredient name	Result	Species	Dose	Exposure
Isopropanol	LD50 Oral	Rat	5,045 mg/kg	-
	LD50 Dermal	Rabbit	12,800 mg/kg	-

- Skin corrosion/irritation** : No data available.
- Eye damage/irritation** : No data available.
- Respiratory irritation** : No data available.
- Respiratory sensitization** : No data available.
- Skin sensitization** : No data available.
- Germ cell mutagenicity** : No data available.
- Carcinogenicity** : No data available.
- Reproductive Toxicity** : No data available.

Specific Target Organ Toxicity:

- Single exposure** : None known.
- Repeat exposure** : None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Isopropanol	LC50 11,130 mg/L	Fathead minnow	48 hours

- 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 PVT and vPvB assessment** : No data available.

12.6 Other adverse effects : No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods : The generation of waste should be avoided or minimized wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: TRANSPORTATION INFORMATION

	14.1 UN Number	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 Packing group	14.5 Environmental hazards
US DOT	UN1219	Isopropanol	3	II	No
Canada TDG	UN1219	Isopropanol	3	II	No
EU ADR/RID	UN1219	Isopropanol	3	II	No
IMDG	UN1219	Isopropanol	3	II	No
IATA	UN1219	Isopropanol	3	II	No

14.6 Special precautions for user : None.

14.7 Transport in bulk according to Annex III MARPOL 73/78 and the IBC Code : Not determined

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

US Regulations

OSHA hazard classification : Flammable, irritant
TSCA Inventory : All of the components are listed on the TSCA Inventory.
SARA 302 : This product does not contain chemicals regulated under SARA Section 302.
SARA 311 Hazard Classification : Acute health hazard; fire hazard
SARA 313 : This product does not contain chemicals regulated under SARA Section 313.
CERCLA Section 103 : This product does not contain chemicals regulated under CERCLA.
California Prop 65 : This product contains the following chemical(s) which are known to the state of California to cause cancer, reproductive toxicity, or birth defects: None known.

SECTION 16: OTHER INFORMATION

Revision history : Updated formatting

CLP/GHS Classification and H Phrases for Reference (See Section 3)

H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
H350	May cause cancer.
H402	Harmful to aquatic life.

NFPA Rating	Health: 2	Fire: 3	Instability: 0
HMIS Rating	Health: 2	Fire: 3	Physical Hazard: 0

Notice to reader:

This Safety Data Sheet (SDS) has been prepared in accordance with the Classification, Labelling, and Packaging (CLP) regulation in the EU and the Globally Harmonized System (GHS) (29CFR 1910.1200) in the US. It complies with the requirements of the Canadian Controlled Products Regulations. 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.