SECTION 1: Identification

1.1. Identification

Trade name: Isopropanol
Product code: 3803660, 3803660E

1.2. Recommended use and restrictions on use

Recommended use: For use in all histological and cytological procedures
Restrictions on use: Other uses

1.3. Supplier

Leica Biosystems Richmond, Inc
5205 Route 12
Richmond, IL 60071 - USA
T 844-534-2252
LBSNA-LBS-QA@leicabiosystems.com - leicabiosystems.com

1.4. Emergency telephone number

<table>
<thead>
<tr>
<th>Organisation/Company</th>
<th>Emergency number</th>
</tr>
</thead>
<tbody>
<tr>
<td>ChemTrec</td>
<td>800-424-9300</td>
</tr>
<tr>
<td>International Calls (call collect)</td>
<td>+1 703-527-3887</td>
</tr>
<tr>
<td>Australia 24 Hr Poisons Information Centre</td>
<td>13 11 26</td>
</tr>
</tbody>
</table>

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification
- Flammable liquids, Category 2
- Serious eye damage/eye irritation, Category 2
- Specific target organ toxicity — Single exposure, Category 3, Narcosis

Highly flammable liquid and vapour
Causes serious eye irritation
May cause drowsiness or dizziness

2.2. GHS Label elements, including precautionary statements

GHS-US labelling

Hazard pictograms (GHS-US):
- GHS02
- GHS07

Signal word (GHS-US): Danger

Hazard statements (GHS-US):
- Highly flammable liquid and vapour
- Causes serious eye irritation
- May cause drowsiness or dizziness

Precautionary statements (GHS-US):
- Keep away from heat, sparks, open flames, hot surfaces. No smoking.
- Keep container tightly closed
- Ground/Bond container and receiving equipment
- Use explosion-proof equipment
- Use only non-sparking tools
- Take precautionary measures against static discharge
- Avoid breathing mists/vapors/spray
Isopropanol
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Wash thoroughly after handling
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
If inhaled: Remove person to fresh air and keep comfortable for breathing
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Call a POISON CENTER or doctor/physician if you feel unwell
If eye irritation persists: Get medical advice/attention
In case of fire: Use dry chemical, foam, or water spray for extinction.
Store in a well-ventilated place. Keep container tightly closed
Store in a well-ventilated place. Keep cool
Store locked up
Dispose of contents/container in accordance with all local/regional/national/international regulations

2.3. Other hazards which do not result in classification
No additional information available

2.4. Unknown acute toxicity (GHS US)
Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
</table>
| Isopropanol   | (CAS-No.) 67-63-0  | < 100 | Flam. Liq. 2, H225
|               |                    |    | Eye Irrit. 2, H319
|               |                    |    | STOT SE 3, H336               |

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)
Symptoms/effects : May cause drowsiness or dizziness.

4.3. Immediate medical attention and special treatment, if necessary
Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

5.2. Specific hazards arising from the chemical
Fire hazard : Highly flammable liquid and vapour.
Reactivity : Highly flammable liquid and vapour.
5.3. Special protective equipment and precautions for fire-fighters
Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures
6.1. Personal precautions, protective equipment and emergency procedures
6.1.1. For non-emergency personnel
Emergency procedures: Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing mists/vapors/spray.

6.1.2. For emergency responders
Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: “Exposure controls/personal protection”.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

6.4. Reference to other sections
For further information refer to section 13.

SECTION 7: Handling and storage
7.1. Precautions for safe handling
Precautions for safe handling: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing mists/vapors/spray.

Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities
Technical measures: Ground/bond container and receiving equipment.
Storage conditions: Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

SECTION 8: Exposure controls/personal protection
8.1. Control parameters

<table>
<thead>
<tr>
<th>Substance</th>
<th>ACGIH TWA (ppm)</th>
<th>ACGIH STEL (ppm)</th>
<th>OSHA PEL (mg/m³)</th>
<th>OSHA PEL (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropanol</td>
<td>200 ppm</td>
<td>400 ppm</td>
<td>980 mg/m³</td>
<td>400 ppm</td>
</tr>
</tbody>
</table>

Remark (ACGIH): Eye & URT irr; CNS impair
Isopropanol
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

8.2. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station.
Environmental exposure controls: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:
Protective gloves

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid
Colour: Colourless
Odour: Alcohol odour
Odour threshold: No data available
pH: No data available
Melting point: Not applicable
Freezing point: No data available
Boiling point: No data available
Flash point: 53 °F /11 °C
Relative evaporation rate (butylacetate=1): No data available
Flammability (solid, gas): Not applicable.
Vapour pressure: No data available
Relative vapour density at 20 °C: No data available
Relative density: No data available
Density: 0.79
Solubility: No data available
Log Pow: No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
Explosive limits: No data available
Explosive properties: No data available
Oxidising properties: No data available
9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
Highly flammable liquid and vapour.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials
No additional information available

10.6. Hazardous decomposition products
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

<table>
<thead>
<tr>
<th>Isopropanol (67-63-0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 dermal rabbit</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
</tr>
<tr>
<td>ATE US (dermal)</td>
</tr>
<tr>
<td>ATE US (vapours)</td>
</tr>
<tr>
<td>ATE US (dust,mist)</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

<table>
<thead>
<tr>
<th>Isopropanol (67-63-0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC group</td>
</tr>
</tbody>
</table>

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure) : Not classified
Aspiration hazard : Not classified
## SECTION 12: Ecological information

### 12.1. Toxicity

**Ecology - general**: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

<table>
<thead>
<tr>
<th><strong>Isopropanol (67-63-0)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LC50 fish</strong> 2</td>
</tr>
<tr>
<td>9640 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Pimephales promelas; Flow-through system; Fresh water; Experimental value)</td>
</tr>
<tr>
<td><strong>EC50 Daphnia 2</strong></td>
</tr>
<tr>
<td>13299 mg/l (EC50; Other; 48 h; Daphnia magna)</td>
</tr>
<tr>
<td><strong>Threshold limit algae 1</strong></td>
</tr>
<tr>
<td>&gt; 1000 mg/l (EC50; UBA; 72 h; Scenedesmus subspicatus)</td>
</tr>
</tbody>
</table>

### 12.2. Persistence and degradability

**Isopropanol (67-63-0)**

- **Persistence and degradability**: Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. No (test)data on mobility of the substance available.
- **Biochemical oxygen demand (BOD)**: 1.19 g O₂/g substance
- **Chemical oxygen demand (COD)**: 2.23 g O₂/g substance
- **ThOD**: 2.4 g O₂/g substance

### 12.3. Bioaccumulative potential

**Isopropanol (67-63-0)**

- **Log Pow**: 0.05 (Weight of evidence approach; Other; 25 °C)
- **Bioaccumulative potential**: Low potential for bioaccumulation (Log Kow < 4).

### 12.4. Mobility in soil

**Isopropanol (67-63-0)**

- **Surface tension**: 0.021 N/m (25 °C)

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

**Waste treatment methods**: Dispose of contents/container in accordance with licensed collector’s sorting instructions.

## SECTION 14: Transport information

**Department of Transportation (DOT)**

- In accordance with DOT
- **Transport document description**: UN1219 Isopropanol, 3, II
- **UN-No.(DOT)**: UN1219
- **Proper Shipping Name (DOT)**: Isopropanol
- **Class (DOT)**: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
- **Packing group (DOT)**: II - Medium Danger
Isopropanol
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Hazard labels (DOT) : 3 - Flammable liquid

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L
Other information : No supplementary information available

Transport by sea

Transport document description (IMDG) : UN 1219 ISOPROPANOL , 3, II
UN-No. (IMDG) : 1219
Proper Shipping Name (IMDG) : ISOPROPANOL
Class (IMDG) : 3 - Flammable liquids
Packing group (IMDG) : II - substances presenting medium danger
Limited quantities (IMDG) : 1 L

Air transport

Transport document description (IATA) : UN 1219 Isopropanol, 3, II
UN-No. (IATA) : 1219
Proper Shipping Name (IATA) : Isopropanol
Class (IATA) : 3 - Flammable Liquids
Packing group (IATA) : II - Medium Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

Isopropanol (67-63-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313

15.2. International regulations

CANADA

Isopropanol (67-63-0)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations
No additional information available

National regulations
No additional information available
Isopropanol
Safety Data Sheet

15.3. US State regulations

Isopropanol (67-63-0)
U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Full text of H-statements:

<table>
<thead>
<tr>
<th>H-</th>
<th>Full text</th>
</tr>
</thead>
<tbody>
<tr>
<td>H225</td>
<td>Highly flammable liquid and vapour</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H336</td>
<td>May cause drowsiness or dizziness</td>
</tr>
</tbody>
</table>

SDS US Leica

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.