

### SECTION 1: Identification

#### 1.1. Identification

Trade name : Reagent Alcohol 80%  
Product code : 3803680

#### 1.2. Recommended use and restrictions on use

Recommended use : General Histology and Cytology Dehydrating Agent  
Restrictions on use : Other uses

#### 1.3. Supplier

Leica Biosystems Richmond, Inc  
5205 Route 12  
Richmond, IL 60071 - USA  
T 844-534-2262  
[LBSNA-LBS-QA@leicabiosystems.com](mailto:LBSNA-LBS-QA@leicabiosystems.com) - [leicabiosystems.com](http://leicabiosystems.com)

#### 1.4. Emergency telephone number

| Organization/Company                       | Emergency number |
|--|------------------|
| ChemTrec                                   | 800-424-9300     |
| International Calls (call collect)         | +1 703-527-3887  |
| Australia 24 Hr Poisons Information Centre | 13 11 26         |

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Flammable liquids Category 2 : Highly flammable liquid and vapor  
Specific target organ toxicity (single exposure) Category 1 : Causes damage to organs (nervous system and eyes)

#### 2.2. GHS Label elements, including precautionary statements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : Highly flammable liquid and vapor  
Causes damage to organs (nervous system and eyes)

Precautionary statements (GHS-US) : Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Keep away from heat, sparks, open flames, hot surfaces. No smoking.  
Ground/Bond container and receiving equipment  
Use explosion-proof equipment  
Use only non-sparking tools  
Take precautionary measures against static discharge  
Do not breathe mist/vapours/spray.  
Avoid contact during pregnancy/while nursing  
Wash thoroughly after handling

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Do not eat, drink or smoke when using this product  
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

| Name        | Product identifier | %        | GHS-US classification  |
|-------------|--------------------|----------|--|
| Ethanol     | (CAS No) 64-17-5   | 50 - 75  | Flam. Liq. 2, H225<br>Acute Tox. 4 (Inhalation:vapour), H332<br>Eye Irrit. 2, H319   |
| methanol    | (CAS No) 67-56-1   | 2.5 - 10 | Flam. Liq. 2, H225<br>Acute Tox. 3 (Oral), H301<br>Acute Tox. 3 (Dermal), H311<br>Acute Tox. 3 (Inhalation), H331<br>Acute Tox. 3 (Inhalation:vapour), H331<br>STOT SE 1, H370 |
| Isopropanol | (CAS No) 67-63-0   | 2.5 - 10 | Flam. Liq. 2, H225<br>Eye Irrit. 2, H319<br>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 : IF exposed or concerned: Get medical advice/attention. Call a poison center/doctor/physician 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 : Rinse mouth. Call a poison center/doctor/physician if you feel unwell.

### 4.2. Most important symptoms and effects (acute and delayed)

No additional information available

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### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

### 5.2. Specific hazards arising from the chemical

Fire hazard : Highly flammable liquid and vapor.

Reactivity : Highly flammable liquid and vapor.

### 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 : No open flames, no sparks, and no smoking. Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe mist/vapours/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. Notify authorities if product enters sewers or public waters.

### 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.

Other information : Dispose of materials or solid residues at an authorized site.

### 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 : Ensure good ventilation of the work station. 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 vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Do not breathe mist/vapours/spray.

Hygiene measures : Separate working clothes from town clothes. Launder separately. 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.

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### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

| Ethanol (64-17-5)     |                                     |  |
|-----------------------|-------------------------------------|--|
| ACGIH                 | ACGIH STEL (ppm)                    | 1000 ppm (Ethanol; USA; Short time value; TLV - Adopted Value)                           |
| Isopropanol (67-63-0) |                                     |  |
| ACGIH                 | ACGIH TWA (ppm)                     | 200 ppm (2-propanol; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value) |
| ACGIH                 | ACGIH STEL (ppm)                    | 400 ppm (2-propanol; USA; Short time value; TLV - Adopted Value)                         |
| ACGIH                 | Remark (ACGIH)                      | Eye & URT irr; CNS impair  |
| OSHA                  | OSHA PEL (TWA) (mg/m <sup>3</sup> ) | 980 mg/m <sup>3</sup>  |
| OSHA                  | OSHA PEL (TWA) (ppm)                | 400 ppm  |
| Methanol (67-56-1)    |                                     |  |
| ACGIH                 | ACGIH TWA (ppm)                     | 200 ppm (Methanol; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)   |
| ACGIH                 | ACGIH STEL (ppm)                    | 250 ppm (Methanol; USA; Short time value; TLV - Adopted Value)                           |

#### 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:

Wear respiratory protection

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state : Liquid  
Color : Colorless  
Odor : Alcohol odour  
Odor threshold : No data available  
pH : No data available  
Melting point : Not applicable

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|   |                     |
|---|---------------------|
| Freezing point                              | : No data available |
| Boiling point                               | : No data available |
| Flash point                                 | : 53 °F /12 °C      |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Flammability (solid, gas)                   | : Not applicable.   |
| Vapor pressure                              | : No data available |
| Relative vapor density at 20 °C             | : No data available |
| Relative density                            | : No data available |
| Specific gravity / 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 |
| Explosion limits                            | : No data available |
| Explosive properties                        | : No data available |
| Oxidizing properties                        | : No data available |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Highly flammable liquid and vapor.

### 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

| Ethanol (64-17-5)  |  |
|--------------------|--|
| LD50 oral rat      | 10740 mg/kg body weight (Rat; OECD 401: Acute Oral Toxicity; Experimental value) |
| LD50 dermal rabbit | > 16000 mg/kg (Rabbit; Literature study)   |

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| <b>Ethanol (64-17-5)</b> |                         |
|--------------------------|-------------------------|
| ATE US (oral)            | 10740 mg/kg body weight |
| ATE US (vapors)          | 11 mg/l/4h              |

| <b>Isopropanol (67-63-0)</b> |   |
|------------------------------|---|
| LD50 dermal rabbit           | 12870 mg/kg (Rabbit; Experimental value; Equivalent or similar to OECD 402; 16.4; Rabbit) |
| LC50 inhalation rat (mg/l)   | 73 mg/l/4h (Rat)  |
| ATE US (dermal)              | 12870 mg/kg body weight   |
| ATE US (vapors)              | 73 mg/l/4h  |
| ATE US (dust, mist)          | 73 mg/l/4h  |

| <b>methanol (67-56-1)</b>  |  |
|----------------------------|--|
| LD50 oral rat              | > 5000 mg/kg (Rat; BASF test; Literature study; 1187-2769 mg/kg bodyweight; Rat; Weight of evidence) |
| LD50 dermal rabbit         | 15800 mg/kg (Rabbit; Literature study)   |
| LC50 inhalation rat (mg/l) | 85 mg/l/4h (Rat; Literature study)   |
| LC50 inhalation rat (ppm)  | 64000 ppm/4h (Rat; Literature study)   |
| ATE US (oral)              | 100 mg/kg body weight  |
| ATE US (dermal)            | 300 mg/kg body weight  |
| ATE US (gases)             | 700 ppmV/4h  |
| ATE US (vapors)            | 3 mg/l/4h  |
| ATE US (dust, mist)        | 0.5 mg/l/4h  |

|                                   |                  |
|-----------------------------------|------------------|
| Skin corrosion/irritation         | : Not classified |
| Serious eye damage/irritation     | : Not classified |
| Respiratory or skin sensitization | : Not classified |
| Germ cell mutagenicity            | : Not classified |
| Carcinogenicity                   | : Not classified |

| <b>Ethanol (64-17-5)</b> |                            |
|--------------------------|----------------------------|
| IARC group               | 1 - Carcinogenic to humans |

| <b>Isopropanol (67-63-0)</b> |                      |
|------------------------------|----------------------|
| IARC group                   | 3 - Not classifiable |

|  |  |
|--|--|
| Reproductive toxicity                            | : Not classified                                     |
| Specific target organ toxicity – single exposure | : Causes damage to organs (nervous system and eyes). |

|  |                  |
|--|------------------|
| 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 or to cause long-term adverse effects in the environment. |
|-------------------|--|

| <b>Ethanol (64-17-5)</b> |  |
|--------------------------|--|
| LC50 fish 1              | 14200 mg/l (LC50; US EPA; 96 h; Pimephales promelas; Flow-through system; Fresh water; Experimental value) |

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

| <b>methanol (67-56-1)</b> |  |
|---------------------------|--|
| LC50 fish 1               | 15400 mg/l (LC50; EPA 660/3 - 75/009; 96 h; Lepomis macrochirus; Flow-through system; Fresh water; Experimental value) |
| EC50 Daphnia 1            | > 10000 mg/l (EC50; DIN 38412-11; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)                 |
| LC50 fish 2               | 10800 mg/l (LC50; 96 h; Salmo gairdneri)   |

### 12.2. Persistence and degradability

| <b>Ethanol (64-17-5)</b>        |   |
|---------------------------------|---|
| Persistence and degradability   | Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil. |
| Biochemical oxygen demand (BOD) | 0.8 - 0.967 g O <sub>2</sub> /g substance   |
| Chemical oxygen demand (COD)    | 1.7 g O <sub>2</sub> /g substance   |
| ThOD                            | 2.1 g O <sub>2</sub> /g substance   |
| BOD (% of ThOD)                 | 0.43  |

| <b>Isopropanol (67-63-0)</b>    |  |
|---------------------------------|--|
| 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 O <sub>2</sub> /g substance   |
| Chemical oxygen demand (COD)    | 2.23 g O <sub>2</sub> /g substance   |
| ThOD                            | 2.4 g O <sub>2</sub> /g substance  |

| <b>methanol (67-56-1)</b>       |   |
|---------------------------------|---|
| Persistence and degradability   | Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil. |
| Biochemical oxygen demand (BOD) | 0.6 - 1.12 g O <sub>2</sub> /g substance  |
| Chemical oxygen demand (COD)    | 1.42 g O <sub>2</sub> /g substance  |
| ThOD                            | 1.5 g O <sub>2</sub> /g substance   |
| BOD (% of ThOD)                 | 0.8 (Literature study)  |

### 12.3. Bioaccumulative potential

| <b>Ethanol (64-17-5)</b>  |  |
|---------------------------|--|
| BCF fish 1                | 1 (BCF; Other; 72 h; Cyprinus carpio; Static system; Fresh water; Read-across) |
| Log Pow                   | -0.31 (Experimental value)   |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4).                               |

| <b>Isopropanol (67-63-0)</b> |  |
|------------------------------|--|
| Log Pow                      | 0.05 (Weight of evidence approach; Other; 25 °C) |
| Bioaccumulative potential    | Low potential for bioaccumulation (Log Kow < 4). |

| <b>methanol (67-56-1)</b> |  |
|---------------------------|--|
| BCF fish 1                | < 10 (BCF; 72 h; Leuciscus idus)               |
| Log Pow                   | -0.77 (Experimental value; Other)              |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). |

### 12.4. Mobility in soil

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| Ethanol (64-17-5)     |   |
|-----------------------|---|
| Surface tension       | 0.022 N/m (20 °C)                       |
| Log Koc               | Koc,PCKOCWIN v1.66; 1; Read-across      |
| Isopropanol (67-63-0) |   |
| Surface tension       | 0.021 N/m (25 °C)                       |
| methanol (67-56-1)    |   |
| Surface tension       | 0.023 N/m (20 °C)                       |
| Log Koc               | Koc,PCKOCWIN v1.66; 1; Calculated value |

### 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 : UN1987 Alcohols, n.o.s. (Ethanol, Methanol), 3, II

UN-No.(DOT) : UN1987

Proper Shipping Name (DOT) : Alcohols, n.o.s.  
Ethanol, Methanol

Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Packing group (DOT) : II - Medium Danger

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 1987 ALCOHOLS, N.O.S. (Ethanol, Methanol), 3, II

UN-No. (IMDG) : 1987

Proper Shipping Name (IMDG) : ALCOHOLS, N.O.S.

Class (IMDG) : 3 - Flammable liquids

Packing group (IMDG) : II - substances presenting medium danger

Limited quantities (IMDG) : 1 L



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### Air transport

|                                       |   |
|---------------------------------------|---|
| Transport document description (IATA) | : UN 1987 Alcohols, n.o.s. (Ethanol, Methanol), 3, II |
| UN-No. (IATA)                         | : 1987  |
| Proper Shipping Name (IATA)           | : Alcohols, n.o.s.                                    |
| Class (IATA)                          | : 3 - Flammable Liquids                               |
| Packing group (IATA)                  | : II - Medium Danger                                  |

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Ethanol (64-17-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 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

#### methanol (67-56-1)

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

CERCLA RQ

5000 lb

### 15.2. International regulations

#### CANADA

#### Ethanol (64-17-5)

Listed on the Canadian DSL (Domestic Substances List)

#### Isopropanol (67-63-0)

Listed on the Canadian DSL (Domestic Substances List)

#### methanol (67-56-1)

Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

No additional information available

#### National regulations

#### Ethanol (64-17-5)

Listed on IARC (International Agency for Research on Cancer)

#### methanol (67-56-1)

Listed on EPA Hazardous Air Pollutant (HAPS)

### 15.3. US State regulations

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### methanol (67-56-1)

|   |   |   |   |                                  |
|---|---|---|---|----------------------------------|
| U.S. - California - Proposition 65 - Carcinogens List | U.S. - California - Proposition 65 - Developmental Toxicity | U.S. - California - Proposition 65 - Reproductive Toxicity - Female | U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No significant risk level (NSRL) |
| No  | Yes   | No  | No  |                                  |

### Ethanol (64-17-5)

U.S. - New Jersey - Right to Know Hazardous Substance List

### Isopropanol (67-63-0)

U.S. - New Jersey - Right to Know Hazardous Substance List

### methanol (67-56-1)

U.S. - New Jersey - Right to Know Hazardous Substance List

## SECTION 16: Other information

Full text of H-phrases:

|      |                                   |
|------|-----------------------------------|
| H225 | Highly flammable liquid and vapor |
| H301 | Toxic if swallowed                |
| H311 | Toxic in contact with skin        |
| H319 | Causes serious eye irritation     |
| H331 | Toxic if inhaled                  |
| H332 | Harmful if inhaled                |
| H336 | May cause drowsiness or dizziness |
| H370 | Causes damage to organs           |

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*