

**SECTION 1: Identification****1.1. Identification**

Trade name : IBF Tissue Fixative  
Product code : 3800680, 3800681, 3800682, 3800768, 3800769, 3800784, 3800811

**1.2. Recommended use and restrictions on use**

Recommended use : Preservation of tissue specimens  
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
Serious eye damage/eye irritation Category 2	Causes serious eye irritation
Skin sensitization, Category 1	May cause an allergic skin reaction
Germ cell mutagenicity Category 2	Suspected of causing genetic defects
Carcinogenicity Category 1A	May cause cancer
Specific target organ toxicity (single exposure) Category 3	May cause respiratory irritation

**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  
May cause an allergic skin reaction  
Causes serious eye irritation  
May cause respiratory irritation  
Suspected of causing genetic defects  
May cause cancer

Precautionary statements (GHS-US) :

: Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood

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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  
Wash thoroughly after handling  
Use only outdoors or in a well-ventilated area  
Contaminated work clothing must not be allowed out of the workplace  
Wear protective gloves/protective clothing/eye protection/face protection.  
IF ON SKIN: Wash with plenty of soap and water  
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  
If exposed or concerned: Get medical advice/attention  
Call a POISON CENTER or doctor/physician if you feel unwell  
If skin irritation or rash occurs: Get medical advice/attention  
If eye irritation persists: Get medical advice/attention  
Wash contaminated clothing before reuse  
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
Isopropanol	(CAS No) 67-63-0	< 25	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Formaldehyde	(CAS No) 50-00-0	< 3	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:vapour), H331 Skin Corr. 1B, H314 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1A, H350

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.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

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First-aid measures after skin contact	: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center/doctor/physician if you feel unwell.

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

Symptoms/effects	: May cause drowsiness or dizziness.
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.

### 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. 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. 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

Additional hazards when processed : In the United States, refer to OSHA 1910.1048 for requirements for handling of formaldehyde solutions.

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- 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. Avoid breathing mists/vapors/spray. Avoid contact with skin and eyes.
- Hygiene measures : Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. 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

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

  

Formaldehyde (50-00-0)		
Not applicable		

### 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:

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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.

### SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Color	: Colorless
Odor	: Pungent
Odor threshold	: No data available
pH	: 3.7 - 4.9
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 87 °F
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	: 1.37
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.

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### 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

Isopropanol (67-63-0)	
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

Formaldehyde (50-00-0)	
ATE US (oral)	100 mg/kg body weight
ATE US (dermal)	300 mg/kg body weight
ATE US (vapors)	3 mg/l/4h

Skin corrosion/irritation : Not classified  
pH: 3.7 - 4.9

Serious eye damage/irritation : Causes serious eye irritation.  
pH: 3.7 - 4.9

Respiratory or skin sensitization : May cause an allergic skin reaction.

Germ cell mutagenicity : Suspected of causing genetic defects .

Carcinogenicity : May cause cancer .

Isopropanol (67-63-0)	
IARC group	3 - Not classifiable

Formaldehyde (50-00-0)	
IARC group	1 - Carcinogenic to humans

Reproductive toxicity : Not classified

Specific target organ toxicity – single exposure : May cause respiratory irritation.

Specific target organ toxicity – repeated exposure : Not classified

Aspiration hazard : Not classified

Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.

## 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.

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Isopropanol (67-63-0)	
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)

### 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 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

Formaldehyde (50-00-0)	
Persistence and degradability	Readily biodegradable in water. No (test)data on mobility of the components available. Photodegradation in the air.
Biochemical oxygen demand (BOD)	0.64 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.06 g O <sub>2</sub> /g substance
ThOD	1.068 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.6

### 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).

Formaldehyde (50-00-0)	
Log Pow	-0.78 - 0.0
Bioaccumulative potential	Bioaccumulation: not applicable.

### 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 : UN1993 Flammable liquids, n.o.s. (Isopropanol), 3, III

UN-No.(DOT) : UN1993

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Proper Shipping Name (DOT) : Flammable liquids, n.o.s.  
Isopropanol  
Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120  
Packing group (DOT) : III - Minor Danger  
Hazard labels (DOT) : 3 - Flammable liquid



DOT Symbols : G - Identifies PSN requiring a technical name  
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L

### Transport by sea

Transport document description (IMDG) : UN 1993 FLAMMABLE LIQUID, N.O.S. (Isopropanol), 3, III  
UN-No. (IMDG) : 1993  
Proper Shipping Name (IMDG) : FLAMMABLE LIQUID, N.O.S.  
Class (IMDG) : 3 - Flammable liquids  
Packing group (IMDG) : III - substances presenting low danger  
Limited quantities (IMDG) : 5 L

### Air transport

Transport document description (IATA) : UN 1993 Flammable liquid, n.o.s. (Isopropanol), 3, III  
UN-No. (IATA) : 1993  
Proper Shipping Name (IATA) : Flammable liquid, n.o.s.  
Class (IATA) : 3 - Flammable Liquids  
Packing group (IATA) : III - Minor 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

#### Formaldehyde (50-00-0)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory  
Subject to reporting requirements of United States SARA Section 313

CERCLA RQ	100 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	500 lb



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### 15.2. International regulations

#### CANADA

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

Listed on the Canadian DSL (Domestic Substances List)

##### Formaldehyde (50-00-0)

Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

No additional information available

#### National regulations

No additional information available

### 15.3. US State regulations

##### Formaldehyde (50-00-0)

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)
Yes	No	No	No	40

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

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

##### Formaldehyde (50-00-0)

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

U.S. - Pennsylvania - RTK (Right to Know) 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
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H331	Toxic if inhaled
H336	May cause drowsiness or dizziness
H341	Suspected of causing genetic defects
H350	May cause cancer

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*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*