



Buffered Formalin Concentrate 5

Safety Data Sheet

according to the Model Work Health and Safety Regulations

Date of issue: 05/09/2018

Revision date: 05/09/2018

Version: 1.0

SECTION 1: Identification : Product identifier and chemical identity

1.1. Product identifier

Trade name : Buffered Formalin Concentrate 5
Product code : 3800540, 3800541

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use : Preservation of tissue specimens
Restrictions on use : Other uses

1.4. Supplier's details

Leica Microsystems Pty Ltd
Suite 2, Level 3, Building A, Talavera Road
Macquarie Park - 2113 Australia

1.5. Emergency phone number

Organisation/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: Hazards identification

2.1. Classification of the hazardous chemical

Classification according to the model Work Health and Safety Regulations (WHS Regulations)

Flammable liquids, Category 2 H225

2.2. Label elements

Signal word (GHS-AU) : Danger
Hazard statements (GHS-AU) : H225 - Highly flammable liquid and vapour
Precautionary statements (GHS-AU) : P210 - Keep away from heat, sparks, open flames, hot surfaces. No smoking.
P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof equipment
P242 - Use only non-sparking tools
P243 - Take precautionary measures against static discharge
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P370+P378 - In case of fire: Use dry chemical, foam, or water spray for extinction.
P403+P235 - Store in a well-ventilated place. Keep cool
P501 - Dispose of contents/container in accordance with all local/regional/national/international regulations

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

Name	CAS-No.	Compound type	%	Classification according to the model Work Health and Safety Regulations (WHS Regulations)
methanol	67-56-1		< 10	Flam. Liq. 2, H225
Formaldehyde	50-00-0		< 30	Not classified

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SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Call a physician immediately.
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. Call a physician immediately.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Symptoms caused by exposure

Symptoms/effects after skin contact	: Burns. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.

4.3. Indication of any immediate medical attention and special treatment needed

Other medical advice or treatment	: Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
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5.2. Special hazards arising from the substance or mixture

Fire hazard	: No data available on direct fire hazard.
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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.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Only qualified personnel equipped with suitable protective equipment may intervene.
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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".
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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.
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SECTION 7: Handling and storage, including how the chemical may be safely used

7.1. Precautions for safe handling

Precautions for safe handling	: Ensure good ventilation of the work station. 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. Provide local exhaust or general room ventilation. Do not get in eyes, on skin, or on clothing.
Hygiene measures	: 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	: Comply with applicable regulations.
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 - exposure standards

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methanol (67-56-1)		
USA - ACGIH	ACGIH TWA (ppm)	200 ppm (Methanol; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
USA - ACGIH	ACGIH STEL (ppm)	250 ppm (Methanol; USA; Short time value; TLV - Adopted Value)

Exposure limit values for the other components

8.2. Monitoring

No additional information available

8.3. Appropriate engineering controls

Appropriate engineering controls : In the United States, refer to OSHA 1910.1048 for requirements for handling of formaldehyde solutions.

8.4. Personal protective equipment

Hand protection : Protective gloves
Eye protection : Safety glasses
Skin and body protection : Wear suitable protective clothing
Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

Physical state : Liquid
Colour : Colourless
Odour : Pungent
Odour threshold : No data available
pH : 6.8 - 6.95
Relative evaporation rate (butylacetate=1) : No data available
Melting point : Not applicable
Boiling point : No data available
Flash point : No data available
Auto-ignition temperature : No data available
Flammability (solid, gas) : No data available
Vapour pressure : No data available
Relative density : No data available
Density : 1.11
Solubility : No data available
Log Pow : No data available
Viscosity : No data available
Explosive properties : No data available
Explosive limits : No data available
Minimum ignition energy : No data available
Fat solubility : No data available

SECTION 10: Stability and reactivity

Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : No dangerous reactions known under normal conditions of use.
Conditions to avoid : Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.
Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

Acute toxicity (oral) : Not classified

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Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

methanol (67-56-1)	
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)

Skin corrosion/irritation : Not classified
pH: 6.8 - 6.95
Serious eye damage/irritation : Not classified
pH: 6.8 - 6.95
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

Buffered Formalin Concentrate 5	
Density	1.11

SECTION 12: Ecological information

According to the National Code of Practice for the Preparation of Material Safety Data Sheets, Environmental classification information is not mandatory. Information relevant for GHS classification is available on request

12.1. Ecotoxicity

Ecology - general : Before neutralisation, the product may represent a danger to aquatic organisms.
Acute aquatic toxicity : Not classified
Chronic aquatic toxicity : Not classified

12.2. Persistence and degradability

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 ₂ /g substance
Chemical oxygen demand (COD)	1.06 g O ₂ /g substance
ThOD	1.068 g O ₂ /g substance
BOD (% of ThOD)	0.6

methanol (67-56-1)	
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 ₂ /g substance
Chemical oxygen demand (COD)	1.42 g O ₂ /g substance
ThOD	1.5 g O ₂ /g substance
BOD (% of ThOD)	0.8 (Literature study)

12.3. Bioaccumulative potential

Formaldehyde (50-00-0)	
Log Pow	See section 12.1 on ecotoxicology
Bioaccumulative potential	Bioaccumulation: not applicable.

methanol (67-56-1)	
BCF fish 1	See section 12.1 on ecotoxicology
Log Pow	See section 12.1 on ecotoxicology

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methanol (67-56-1)	
Log Koc	See section 12.1 on ecotoxicology
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

Formaldehyde (50-00-0)	
Log Pow	See section 12.1 on ecotoxicology

methanol (67-56-1)	
Surface tension	0.023 N/m (20 °C)
Log Pow	See section 12.1 on ecotoxicology
Log Koc	See section 12.1 on ecotoxicology

12.5. Other adverse effects

Ozone : Not classified
Other adverse effects : No additional information available

SECTION 13: Disposal considerations

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

SECTION 14: Transport information

14.1. UN number

UN-No. (IMDG) : 2209
UN-No. (IATA) : 2209

14.2. Proper Shipping Name - Addition

Proper Shipping Name (IMDG) : FORMALDEHYDE SOLUTION
Proper Shipping Name (IATA) : Formaldehyde solution

14.3. Transport hazard class(es)

IMDG

Transport hazard class(es) (IMDG) : 8
Danger labels (IMDG) : 8



IATA

Transport hazard class(es) (IATA) : 8
Hazard labels (IATA) : 8



14.4. Packing group

Packing group (IMDG) : III
Packing group (IATA) : III

14.5. Environmental hazards

Marine pollutant : No

14.6. Special precautions for user

Specific storage requirement : No data available
Shock sensitivity : No data available

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14.7. Additional information

Other information : No supplementary information available

Transport by road and rail

Not applicable

Transport by sea

UN-No. (IMDG) : 2209
Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : P001, LP01
IBC packing instructions (IMDG) : IBC03
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP1
EmS-No. (Fire) : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage) : S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG) : A
Properties and observations (IMDG) : Colourless, clear liquid, with a suffocating pungent odour. Usually stabilized with methyl alcohol. Miscible with water. Causes burns to skin, eyes and mucous membranes.

Air transport

UN-No. (IATA) : 2209
PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y841
PCA limited quantity max net quantity (IATA) : 1L
PCA packing instructions (IATA) : 852
PCA max net quantity (IATA) : 5L
CAO packing instructions (IATA) : 856
CAO max net quantity (IATA) : 60L
ERG code (IATA) : 8i

14.8. Hazchem or Emergency Action Code

Hazchemcode : Not applicable

SECTION 15: Regulatory information

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

No additional information available

15.2. International agreements

No additional information available

SECTION 16: Any other relevant information

Revision date : 05/09/2018

Classification:

Flam. Liq. 2	H225
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Full text of H-statements:

Flam. Liq. 2	Flammable liquids, Category 2
H225	Highly flammable liquid and vapour

SDS Australia 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