



Bouin's Solution

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 : Bouin's Solution
Product code : 38016SS1A

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use : Tissue fixative
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
Skin corrosion/irritation, Category 1A H314

2.2. Label elements

Signal word (GHS-AU) : Danger
Hazard statements (GHS-AU) : H225 - Highly flammable liquid and vapour
H314 - Causes severe skin burns and eye damage
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
P260 - Do not breathe mist/vapours/spray.
P264 - Wash thoroughly after handling
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/physician
P321 - Specific treatment (see supplemental first aid instruction on this label)
P363 - Wash contaminated clothing before reuse
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
P405 - Store locked up
P501 - Dispose of contents/container in accordance with all local/regional/national/international regulations

2.3. Other hazards

No additional information available

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SECTION 3: Composition/information on ingredients

Name	CAS-No.	Compound type	%	Classification according to the model Work Health and Safety Regulations (WHS Regulations)
acetic acid	64-19-7		< 10	Flam. Liq. 3, H226 Acute Tox. 5 (Oral), H303 Skin Corr. 1A, H314
Formaldehyde	50-00-0		< 10	Not classified
methanol	67-56-1		< 3	Flam. Liq. 2, H225

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

No additional information available

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. Avoid contact with skin and eyes.
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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

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

acetic acid (64-19-7)		
USA - ACGIH	ACGIH TWA (ppm)	10 ppm (Acetic acid; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
USA - ACGIH	ACGIH STEL (ppm)	15 ppm (Acetic acid; USA; Short time value; TLV - Adopted Value)

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
Respiratory protection : Wear respiratory protection
Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

Physical state : Liquid
Colour : Yellow
Odour : Pungent
Odour threshold : No data available
pH : No data available
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 : 1.04
Solubility : No data available
Log Pow : No data available
Viscosity : No data available

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

acetic acid (64-19-7)	
LD50 oral rat	3310 mg/kg bodyweight (Rat; Other; Read-across)
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	: Causes severe skin burns and eye damage.
Serious eye damage/irritation	:
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

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Density	1.04

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

acetic acid (64-19-7)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil.
Biochemical oxygen demand (BOD)	0.6 - 0.74 g O ₂ /g substance
Chemical oxygen demand (COD)	1.03 g O ₂ /g substance
ThOD	1.07 g O ₂ /g substance

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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

acetic acid (64-19-7)	
BCF fish 1	See section 12.1 on ecotoxicology
Log Pow	See section 12.1 on ecotoxicology
Log Koc	See section 12.1 on ecotoxicology
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

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
Log Koc	See section 12.1 on ecotoxicology
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

acetic acid (64-19-7)	
Surface tension	0.028 N/m (20 °C)
Log Pow	See section 12.1 on ecotoxicology
Log Koc	See section 12.1 on ecotoxicology
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.

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.
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SECTION 14: Transport information

14.1. UN number

UN-No. (IMDG)	: 3265
UN-No. (IATA)	: 3265

14.2. Proper Shipping Name - Addition

Proper Shipping Name (IMDG)	: Corrosive Liquid, Acidic, Organic, N.O.S., (Contains: Acetic Acid, Formaldehyde)
Proper Shipping Name (IATA)	: Corrosive Liquid, Acidic, Organic, N.O.S., (Contains: Acetic Acid, Formaldehyde)

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14.3. Transport hazard class(es)

IMDG

Transport hazard class(es) (IMDG) : 8

IATA

Transport hazard class(es) (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

14.7. Additional information

Other information : No supplementary information available

Transport by road and rail

Not applicable

Transport by sea

UN-No. (IMDG) : 3265

Air transport

UN-No. (IATA) : 3265

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
Skin Corr. 1A	H314

Full text of H-statements:

Acute Tox. 5 (Oral)	Acute toxicity (oral), Category 5
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
H225	Highly flammable liquid and vapour
H226	Flammable liquid and vapour
H303	May be harmful if swallowed
H314	Causes severe skin burns and eye damage

SDS Australia Leica

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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