



SAFETY DATA SHEET
In Accordance with ISO/DIS 11014

Review Date 02/11/2015

Revision Date 05/23/2012

1 Identification of the Substance/Mixture and Company

Product Name: Bouin's Fluid

MSDS Code: SSFXBOU

Product Description: Tissue Fixative

Manufacturer/Supplier:

American MasterTech
1330 Thurman Street
Lodi, CA 95240
USA
(800) 860-4073

European Authorized Representative:

Emergo Europe
Moleensraat 15
2513 BH The Hague,
The Netherlands

Emergency Telephone Number: Infotrac (800) 535-5053 (24 hours) - International (011) 352-323-3500

2 Hazards Identification

Classification of the substance or mixture



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.
STOT SE 2 H371+H335+H336 May cause damage to organs. May cause respiratory irritation. May cause drowsiness or dizziness.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.
Skin Irrit. 2 H315 Causes skin irritation.
H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
H227 Combustible liquid.
Acute Tox. 5 H313 May be harmful in contact with skin.
Acute Tox. 5 H333 May be harmful if inhaled.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xn; Harmful

R20/21/22-40-68/20/21/22: Harmful by inhalation, in contact with skin and if swallowed. Limited evidence of a carcinogenic effect. Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.



Xi; Irritant

R36/38: Irritating to eyes and skin.


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Product Name: Bouin's Fluid

 Xi; Sensitizing

R43: May cause sensitisation by skin contact.

Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of international guidelines.

Classification system:

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

Label elements

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms

GHS07 GHS08

Signal word Warning

Hazard-determining components of labeling:

formaldehyde

methanol

2,4,6-trinitrophenol

Hazard statements

Combustible liquid.

Harmful if swallowed.

May be harmful in contact with skin.

May be harmful if inhaled.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

Suspected of causing cancer.

May cause damage to organs. May cause respiratory irritation. May cause drowsiness or dizziness.

Precautionary statements

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Do not breathe dust/fume/gas/mist/vapours/spray.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Specific treatment (see on this label).

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:**NFPA ratings (scale 0 - 4)**

Health = 3

Fire = 2

Reactivity = 0

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Product Name: Bouin's Fluid**HMIS-ratings (scale 0 - 4)**

Health = 3

Fire = 2

Reactivity = 0

Other hazards**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.

3 Composition

Chemical characterization: Mixtures**Description:** Mixture of the substances listed below with nonhazardous additions.

Dangerous components:		
CAS: 50-00-0 EINECS: 200-001-8	formaldehyde ----- ☠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ☠ Carc. 2, H351; ☠ Skin Corr. 1B, H314; ☠ Skin Sens. 1, H317	<10%
CAS: 64-19-7 EINECS: 200-580-7	acetic acid ----- ☠ Flam. Liq. 3, H226; ☠ Skin Corr. 1A, H314	<10%
CAS: 67-56-1 EINECS: 200-659-6	methanol ----- ☠ Flam. Liq. 2, H225; ☠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ☠ STOT SE 1, H370	<10%
CAS: 88-89-1 EINECS: 201-865-9	2,4,6-trinitrophenol ----- ☠ Expl. 1.1, H201; ☠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331	<3%

4 First Aid Measures

Description of first aid measures**General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

After skin contact: Immediately wash with water and soap and rinse thoroughly.**After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.**After swallowing:** Immediately call a doctor.**Information for doctor:****Most important symptoms and effects, both acute and delayed:** No further relevant information available.**Indication of any immediate medical attention and special treatment needed:**

No further relevant information available.

5 Firefighting Measures

Extinguishing media**Suitable extinguishing agents:**CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**Special hazards arising from the substance or mixture:** No further relevant information available.

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Advice for firefighters**Protective equipment:** Mouth respiratory protective device.

6 Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Not required.**Environmental precautions:** Do not allow to enter sewers/ surface or ground water.**Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and Storage

Handling:**Precautions for safe handling:**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Information about protection against explosions and fires: Protect from heat.**Conditions for safe storage, including any incompatibilities****Storage:****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:**

Keep receptacle tightly sealed.

Protect from heat and direct sunlight.

Specific end use(s): No further relevant information available.

8 Exposure Controls/Personal Protection

Additional information about design of technical systems: No further data; see item 7.**Control parameters****Components with limit values that require monitoring at the workplace:****50-00-0 formaldehyde**

PEL	Short-term value: 2 ppm Long-term value: 0.75 ppm see 29 CFR 1910.1048(c)
REL	Short-term value: C 0.1* ppm Long-term value: 0.016 ppm *15-min; See Pocket Guide App. A
TLV	Short-term value: C 0.37 mg/m ³ , C 0.3 ppm
SEN	

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Product Name: Bouin's Fluid

64-19-7 acetic acid	
PEL	25 mg/m ³ , 10 ppm
REL	Short-term value: 37 mg/m ³ , 15 ppm Long-term value: 25 mg/m ³ , 10 ppm
TLV	Short-term value: 37 mg/m ³ , 15 ppm Long-term value: 25 mg/m ³ , 10 ppm
67-56-1 methanol	
PEL	260 mg/m ³ , 200 ppm
REL	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin
TLV	Short-term value: 328 mg/m ³ , 250 ppm Long-term value: 262 mg/m ³ , 200 ppm Skin; BEI
88-89-1 2,4,6-trinitrophenol	
PEL	0.1 mg/m ³ Skin
REL	Short-term value: 0.3 mg/m ³ Long-term value: 0.1 mg/m ³ Skin
TLV	0.1 mg/m ³

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls:**Personal protective equipment:****General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Tightly sealed goggles

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9 Physical and Chemical Properties

Information on basic physical and chemical properties	
General Information	
Appearance	
Form:	Fluid
Color:	Yellow
Odor:	Pungent, makes eyes water
Odor threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
Flash point:	66°C (151 °F)
Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	485°C (905 °F)
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Not determined.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not determined.
Density at 20°C (68 °F):	0.98489 g/cm ³ (8.219 lbs/gal)
Relative density:	Not determined.
Vapour density:	Not determined.
Evaporation rate:	Not determined.
Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix.
Segregation coefficient (n-octanol/water):	
Dynamic:	Not determined.
Kinematic:	Not determined.
Other information:	No further relevant information available.

10 Stability and Reactivity

Reactivity:**Chemical stability:****Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.**Possibility of hazardous reactions:** No dangerous reactions known.**Conditions to avoid:** No further relevant information available.**Incompatible materials:** No further relevant information available.

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Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicology Information

Information on toxicological effects
Acute toxicity:
LD/LC50 values that are relevant for classification:
50-00-0 formaldehyde

Oral	LD50	>200 mg/kg (rat)
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67-56-1 methanol

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)

Primary irritant effect:
On the skin: Irritant to skin and mucous membranes.

On the eye: Irritating effect.

Sensitization: Sensitization possible through skin contact.

Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

Irritant

Carcinogenic categories
IARC (International Agency for Research on Cancer)

50-00-0	formaldehyde	1
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NTP (National Toxicology Program)

50-00-0	formaldehyde	R
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12 Ecological Information

Toxicity:
Aquatic toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Behavior in environmental systems:
Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Additional ecological information:
General notes:

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Results of PBT and vPvB assessment
PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects: No further relevant information available.

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13 Disposal Considerations

Uncleaned packagings:**Recommendation:** Disposal must be made according to official regulations.

14 Transport Information

UN-Number DOT, ADR, ADN, IMDG, IATA	Void
UN proper shipping name DOT, ADR, ADN, IMDG, IATA	Void
Transport hazard class(es) DOT, ADR, ADN, IMDG, IATA Class	Void
Packing group DOT, ADR, IMDG, IATA	Void
Environmental hazards Marine pollutant:	No
Special precautions for user:	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:	Not applicable.
UN "Model Regulation":	-

15 Regulatory Information

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

Section 355 (extremely hazardous substances):

50-00-0 formaldehyde

Section 313 (Specific toxic chemical listings):

50-00-0 formaldehyde

67-56-1 methanol

88-89-1 2,4,6-trinitrophenol

TSCA (Toxic Substances Control Act):

All ingredients are listed.

Proposition 65**Chemicals known to cause cancer:**

50-00-0 formaldehyde

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

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Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Carcinogenic categories
EPA (Environmental Protection Agency)

50-00-0 formaldehyde

B1

TLV (Threshold Limit Value established by ACGIH)

50-00-0 formaldehyde

A2

NIOSH-Ca (National Institute for Occupational Safety and Health)

50-00-0 formaldehyde

OSHA-Ca (Occupational Safety & Health Administration)

50-00-0 formaldehyde

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms


GHS07 GHS08

Signal word Warning

Hazard-determining components of labelling:

formaldehyde

methanol

2,4,6-trinitrophenol

Hazard statements

Combustible liquid.

Harmful if swallowed.

May be harmful in contact with skin.

May be harmful if inhaled.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

Suspected of causing cancer.

May cause damage to organs. May cause respiratory irritation. May cause drowsiness or dizziness.

Precautionary statements

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Do not breathe dust/fume/gas/mist/vapours/spray.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Specific treatment (see on this label).

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

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Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other Information

This information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of the material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.

Department issuing SDS: Regulatory Department**Contact:** Phone (800) 860-4073**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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