

### SECTION 1: Identification

#### 1.1. Identification

Product form	: Mixture
Trade name	: Bouin's Fixative (Bouin's Fluid)
CAS-No.	: 37330-50-0
Product code	: 16045
Formula	: no data
Synonyms	: Bouin's Fluid

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

Recommended use	: Use as laboratory reagent, Manufacture of substances
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#### 1.3. Supplier

##### Supplier

Polysciences  
400 Valley Road  
Warrington, PA 18976 - United States  
T +1 215 343 6484 - F +1 215 343 0214  
[info@polysciences.com](mailto:info@polysciences.com) - [www.polysciences.com](http://www.polysciences.com)

#### 1.4. Emergency telephone number

Emergency number	: 24-hour emergency phone number ChemTel 1-800-255-3924
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### SECTION 2: Hazard(s) identification

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

##### GHS US classification

Acute toxicity (inhalation:vapor) Category 4	Harmful if inhaled
Skin corrosion/irritation Category 2	Causes skin irritation
Serious eye damage/eye irritation Category 1	Causes serious eye damage
Skin sensitization, Category 1	May cause an allergic skin reaction
Germ cell mutagenicity Category 2	Suspected of causing genetic defects
Carcinogenicity Category 2	Suspected of causing cancer
Hazardous to the aquatic environment – Acute Hazard Category 3	Harmful to aquatic life

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

##### GHS US labeling

Hazard pictograms (GHS US)



Signal word (GHS US)

: Danger

Hazard statements (GHS US)

: Causes skin irritation  
May cause an allergic skin reaction  
Causes serious eye damage  
Harmful if inhaled  
Suspected of causing genetic defects  
Suspected of causing cancer  
Harmful to aquatic life

Precautionary statements (GHS US)

: Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Avoid breathing dust/fume/gas/mist/vapors/spray.  
Wash hands, forearms and face thoroughly after handling.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing must not be allowed out of the workplace.

#### 2.3. Other hazards which do not result in classification

No additional information available

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### 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
Water	(CAS-No.) 7732-18-5	70 – 80	Not classified
Acetic Acid (Glacial) Technical Grade	(CAS-No.) 64-19-7	1 – 10	Flam. Liq. 3, H226 Skin Corr. 1A, H314
Formaldehyde	(CAS-No.) 50-00-0	1 – 10	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1A, H350 STOT SE 3, H336 Aquatic Acute 2, H401
Picric Acid	(CAS-No.) 88-89-1	0 – 5	Expl. 1.1, H201 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331

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 : Call a physician immediately.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.
- First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. 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. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after inhalation : May cause respiratory irritation.
- Symptoms/effects after skin contact : Burns. May cause an allergic skin reaction. Irritation.
- Symptoms/effects after eye contact : Serious damage to eyes. Mild eye irritation.
- Symptoms/effects after ingestion : Burns.

### 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.
- Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 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. Do not breathe dust/fume/gas/mist/vapors/spray. No open flames, no sparks, and no smoking.

##### 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

For containment : Collect spillage.

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. 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. Wear personal protective equipment. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray. 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.

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 at room temp. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

<b>Bouin's Fixative (Bouin's Fluid) (37330-50-0)</b>	
No additional information available	
<b>Picric Acid (88-89-1)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	Picric acid
ACGIH TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Remark (ACGIH)	TLV@ Basis: Skin sens; dermatitis; eye irr
Regulatory reference	ACGIH 2020
<b>USA - OSHA - Occupational Exposure Limits</b>	
Local name	Picric acid
OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
<b>Acetic Acid (Glacial) Technical Grade (64-19-7)</b>	
No additional information available	

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### Formaldehyde (50-00-0)

No additional information available

### Water (7732-18-5)

No additional information available

## 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:

[In case of inadequate ventilation] wear respiratory protection.

### Personal protective equipment symbol(s):



## SECTION 9: Physical and chemical properties

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

Physical state : Liquid  
Appearance : yellow liquid formaldehyde odor.  
Color : Colorless  
Odor : Mixture contains one or more component(s) which have the following odour:  
Odor threshold : No data available  
pH :  $\leq 2$   
Melting point : Not applicable  
Freezing point : No data available  
Boiling point : 206  
Flash point : no data  
Relative evaporation rate (butyl acetate=1) : No data available  
Flammability (solid, gas) : Not applicable.  
Vapor pressure : 17  
Relative vapor density at 20°C : 1.04  
Relative density : No data available  
Solubility : No data available  
Partition coefficient n-octanol/water (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

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Oxidizing properties : No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport. 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

None under recommended storage and handling conditions (see section 7). 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 (oral) : Not classified.  
Acute toxicity (dermal) : Not classified.  
Acute toxicity (inhalation) : Not classified. Not classified. Harmful if inhaled. Not classified.

Bouin's Fixative (Bouin's Fluid) (37330-50-0)	
LD50 oral rat	800
LD50 dermal rabbit	270
ATE US (oral)	800 mg/kg body weight
ATE US (dermal)	270 mg/kg body weight
ATE US (vapors)	20 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.  
pH: ≤ 2  
Serious eye damage/irritation : Causes serious eye damage.  
pH: ≤ 2  
Respiratory or skin sensitization : May cause an allergic skin reaction.  
Germ cell mutagenicity : Suspected of causing genetic defects.  
Carcinogenicity : Suspected of causing cancer.

Formaldehyde (50-00-0)	
IARC group	1 - Carcinogenic to humans
National Toxicity Program (NTP) Status	Known Human Carcinogens

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

Formaldehyde (50-00-0)	
STOT-single exposure	May cause drowsiness or dizziness.

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified  
Viscosity, kinematic : No data available

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

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : Harmful to aquatic life.

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 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.  
Additional information : Flammable vapors may accumulate in the container.

### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

Not applicable

#### Transportation of Dangerous Goods

Not applicable

#### Transport by sea

Not applicable

#### Air transport

Not applicable

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### Picric Acid (88-89-1)

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

##### Acetic Acid (Glacial) Technical Grade (64-19-7)

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

CERCLA RQ	5000 lb
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<b>Formaldehyde (50-00-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313 Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	100 lb
RQ (Reportable quantity, section 304 of EPA's List of Lists)	100 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	500 lb
<b>Water (7732-18-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

### 15.2. International regulations

#### CANADA

<b>Picric Acid (88-89-1)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Acetic Acid (Glacial) Technical Grade (64-19-7)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Formaldehyde (50-00-0)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Water (7732-18-5)</b>
Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

#### National regulations

<b>Formaldehyde (50-00-0)</b>
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program)

### 15.3. US State regulations

<b>Formaldehyde (50-00-0)</b>					
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)	Maximum allowable dose level (MADL)
Yes	No	No	No	40 µg/day	

<b>Component</b>	<b>State or local regulations</b>
Picric Acid(88-89-1)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
Acetic Acid (Glacial) Technical Grade(64-19-7)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
Formaldehyde(50-00-0)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

## SECTION 16: Other information

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### Hazard Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS US (GHS HazCom 2012)

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