



Material Safety Data Sheet Bouin's Fixative

Section 1 - Chemical Product and Company Identification

MSDS Name:

Bouin's Fixative

Catalog Numbers:

LC11790

Synonyms:**Company Identification:**

LabChem, Inc.
200 William Pitt Way
Pittsburgh, PA 15238

Company Phone Number:

(412) 826-5230

Emergency Phone Number:

(800) 424-9300

CHEMTREC Phone Number:

(800) 424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	Percent
7732-18-5	Water	balance
64-19-7	Acetic acid	5
50-00-0	Formaldehyde	24
88-89-1	Picric acid	1

Section 3 - Hazards Identification

Emergency Overview

Appearance: *Yellow Liquid.*

Caution! *Contains formaldehyde. May cause eye irritation and possible burns. May cause blindness if swallowed.*

Target Organs: *none known.***Potential Health Effects****Eye:**

May cause blindness. Eye contact may result in irritation, tearing; heavy exposure can result in burns and severe injury with corneal damage.

Skin:

Irritation, redness, burns, blisters, brown or yellow stains.

Ingestion:

May be fatal or cause blindness if swallowed. Asphyxia from throat swelling can occur, perforations of the esophagus and stomach can occur. Ingestion can result in burns to the gastrointestinal tract,



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vomiting, severe pain, diarrhea, vertigo, anuria, jaundice, unconsciousness, acidosis and convulsions. Death occurs from circulatory failure - mean fatal dose is 2 ounces (60cc) of the 37% solution.

Inhalation:

Exposure to 50ppm acetic acid is intolerable for most individuals. Respiratory irritation, coughing, choking, headache, dizziness, weakness can occur. Delayed symptoms include lung fluid, chest pain, frothy sputum, cyanosis, rales and hypotension.

Chronic:

May cause dermatitis and conjunctivitis. Formaldehyde-may result in nasal carcinoma, cirrhosis of the liver, chronic heart disease, respiratory sensitization, skin hardening and cracking, dermatitis, conjunctivitis. Methanol -- blurred or painful vision, conjunctivitis; possible mutagenic or reproductive effects. Yellow/brown stains can occur.

Section 4 - First Aid Measures

Eyes:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids until no evidence of chemical remains. Get medical aid at once.

Skin:

Get medical aid. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Remove contaminated clothing and shoes.

Ingestion:

Get medical aid at once. Give oxygen if respiration is depressed. Induce vomiting (touch finger to back of throat) keeping head lower than hips (prevent aspiration into lungs). If victim is conscious, give 2-4 glasses of water to dilute alkali.

Inhalation:

Give artificial respiration if necessary. Get medical aid. Keep victim warm, at rest. Move victim to fresh air.

Notes to Physician:

Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:

Move container if possible, avoid breathing vapors or dust. Moderate fire and explosion hazard when exposed to heat or flame.

Extinguishing Media:

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

Autoignition Temperature:

No information found.

Flash Point:

No information found.

NFPA Rating:

CAS# 7732-18-5: Not published.

CAS # 64-19-7: health-3; flammability-2; reactivity-0

CAS # 50-00-0 gas: health-3; flammability-4; reactivity-0;

CAS# 88-89-1: health - 3; flammability - 4; reactivity - 4.

Explosion Limits:

Lower: Upper:



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Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spills with absorbent (vermiculite, sand, fuller's earth) and place in plastic bags for later disposal. Shut off ignition source, avoid vapors. Isolate, ventilate spill area. Keep out of sewers/drains.

Section 7 - Handling and Storage

Handling:

Wash thoroughly after handling. Avoid breathing dust, vapor, mist, or gas.

Storage:

Store capped at room temperature. Protect from heat and incompatibles.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Provide local exhaust or general dilution ventilation.

Exposure Limits:

Chemical Name:	ACGIH	NIOSH	OSHA
Water	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.
Acetic acid	10 ppm TWA; 15 ppm STEL	10 ppm TWA; 25 mg/m3 TWA	10 ppm TWA; 25 mg/m3 TWA
Formaldehyde	None of the components are on this list.	0.016 ppm TWA; Potential Occupational Carcinogen - see Appendix A	0.75 ppm TWA PEL; 2 ppm STEL; 0.5 ppm TWA action level; Irritant and potential c;
Picric acid	0.1 mg/m3 TWA	0.1 mg/m3 TWA	0.1 mg/m3 TWA; prevent or reduce skin absorption;

OSHA Vacated PELs:

Acetic acid: 10 ppm TWA; 25 mg/m3 TWA
 Formaldehyde: 3 ppm TWA (unless specified in 1910.1048)
 Picric acid: 0.1 mg/m3 TWA

Personal Protective Equipment

Eyes:

Do not wear contact lenses when working with chemicals. An eye wash fountain should be available in the immediate work area. Wear splash-proof safety goggles.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.



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Respirators:

Firefighting - SCBAF:PD,PP to 50ppm - CCROVF/GMOV/SAF/SCBAF;
to 100ppm - SAF:PD,PP,CF;
Escape - GMOV/-SCBA.

Section 9 - Physical and Chemical Properties

Physical State: Clear liquid

Color: Yellow

Odor: Irritating odor

pH: No information found.

Vapor Pressure: No information found.

Vapor Density: No information found.

Evaporation Rate: No information found.

Viscosity: No information found.

Boiling Point: No information found.

Freezing/Melting Point: No information found.

Decomposition Temperature: No information found.

Solubility in water: Soluble.

Specific Gravity/Density: 1.0

Molecular Formula: No information found.

Molecular Weight: No information found.

Section 10 - Stability and Reactivity

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials.

Incompatibilities with Other Materials:

Reacts with hydrochloric acid to form bis(chloromethyl)ether, a potent carcinogen.

Hazardous Decomposition Products:

Oxides of nitrogen, oxides of carbon.

Hazardous Polymerization:

Has not been reported.

Section 11 - Toxicological Information

RTECS:

CAS# 7732-18-5: ZC0110000.

CAS# 64-19-7: AF1225000.

CAS# 50-00-0: LP8925000.

CAS# 88-89-1: TJ7875000.

LD50/LC50:

CAS# 7732-18-5:

Oral, rat: LD50 = >90 mL/kg.

CAS# 64-19-7:

Inhalation, mouse: LC50 = 5620 ppm/1H

Oral, rat: LD50 = 3310 mg/kg



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Skin, rabbit: LD50 = 1060 mg/kg.
CAS# 50-00-0:
Inhalation, mouse: LC50 =400 mg/m³/2H
Inhalation, rat: LC50 =203 mg/m³
Oral, mouse: LD50 = 42 mg/kg
Oral, rat: LD50 = 100 mg/kg
Skin, rabbit: LD50 = 270 mg/kg.
CAS# 88-89-1:
Oral, rat: LD50 = 200 mg/kg.

Carcinogenicity:

CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.
CAS# 64-19-7: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.
CAS# 50-00-0
ACGIH: A2 - suspected human carcinogen
California: carcinogen; initial date 1/1/88
NIOSH: occupational carcinogen
NTP: Suspect carcinogen
OSHA: Possible Select carcinogen
IARC: Group 2A carcinogen
CAS# 88-89-1: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

Epidemiology:

Teratogenicity:

Reproductive:

Mutagenicity:

Neurotoxicity:

Section 12 - Ecological Information

No information found.

Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: Corrosive liquid, acidic, organic, n.o.s.
(formaldehyde, acetic acid)

Hazard Class: 8

UN Number: UN3265



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Packing Group: PG III

Section 15 - Regulatory Information

US Federal

TSCA:

- CAS# 7732-18-5 is listed on the TSCA Inventory.
- CAS# 64-19-7 is listed on the TSCA Inventory.
- CAS# 50-00-0 is listed on the TSCA Inventory.
- CAS# 88-89-1 is listed on the TSCA Inventory.

SARA Reportable Quantities (RQ):

- CAS# 64-19-7: final RQ = 5000 pounds (2270 kg)
- CAS# 50-00-0: final RQ = 100 pounds (45.4 kg)

CERCLA/SARA Section 313:

This material contains Formaldehyde (CAS# 50-00-0, 24%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
Picric acid is not at a high enough concentration to be reportable under Section 313.

OSHA - Highly Hazardous:

- CAS# 50-00-0 is considered highly hazardous by OSHA.

US State

State Right to Know:

Acetic acid can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.
Formaldehyde can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.
Picric acid can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

California Regulations:

European/International Regulations

Canadian DSL/NDSL:

- CAS# 7732-18-5 is listed on Canada's DSL List.
- CAS# 64-19-7 is listed on Canada's DSL List.
- CAS# 50-00-0 is listed on Canada's DSL List.
- CAS# 88-89-1 is listed on Canada's DSL List.

Canada Ingredient Disclosure List:

- CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.
- CAS# 64-19-7 is listed on Canada's Ingredient Disclosure List.
- CAS# 50-00-0 is listed on Canada's Ingredient Disclosure List.
- CAS# 88-89-1 is listed on Canada's Ingredient Disclosure List.



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Section 16 - Other Information

MSDS Creation Date: February 19, 1998

Revision Date: December 1, 2004

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