

# Safety Data Sheet

## B-5 Fixative Substitute

### Section 1 - Chemical Product and Company Identification

**SDS Name:** B-5 Fixative Substitute

**Catalog Numbers:** F-221

**Company Identification:** ROWLEY BIOCHEMICAL  
10 ELECTRONICS AVENUE  
DANVERS, MA 01923

**For information, call:** 978-739-4883

**Emergency Number:** 800-424-9300

**For CHEMTREC assistance, call:** 800-424-9300

### Section 2 - Hazards Identification

#### GHS Classifications

##### HEALTH HAZARDS

**H301-Acute Oral Toxicity:** 3

**H332-Acute Inhalation toxicity:** 4

**H315-Skin Corrosion/Skin Irritation:** 2

**H319-Eye damage/Irritation:** 2A

**H334-Respiratory Sensitization:** 1B

**H317-Skin Dermal Sensitization:** 1B

**H350-Carcinogenicity:** 1A

##### PHYSICAL HAZARDS

**H225-Flammability:** 2

##### ENVIRONMENTAL HAZARDS

**H410-Aquatic acute environmental Hazards:** 1

## Pictograms or Hazard symbols and Hazard statement.



Signal Word: Danger!

### Hazard Statement(s)

Toxic if swallowed.  
Very toxic to aquatic life.  
Highly flammable liquid and vapour.  
Harmful if inhaled.  
Causes skin irritation.  
May cause allergic skin reaction.  
Causes serious eye irritation.  
**May cause cancer.**

### Precautionary Statement Prevention

#### H301

**P264** Wash thoroughly after handling.

**P270** Do not eat, drink, or smoke when using this product.

**P301 + P310** IF SWALLOWED: Immediately call a POISON CENTER or doctor.

**P330** Rinse Mouth.

**P405** Store locked up.

**P501** Dispose of contents/container in accordance with local/regional/national/international regulations.

#### H332

**P261** Avoid breathing fumes/mist/vapors.

**P304 + P340** If inhaled, remove person to fresh air and keep comfortable for breathing. Use only outdoors or in a well-ventilated area.

**P312** Call a physician if you feel unwell.

#### H315

**P280** Wear protective gloves, clothing, and eye and face protection.

**P302 + P352** If on skin, wash with plenty of water. Remove contact lenses if present and easy to do so. Continue rinsing.

**P332 + P313** If skin irritation occurs, get medical advice/attention.

**P362** Take off contaminated clothing and wash before reuse.

#### H319 + H334

**P305 + P351 + P338** If in eyes, rinse cautiously with water for several minutes.

**P337 + P313** If eye irritation persists, get medical advice/attention.

**P285** In case of inadequate ventilation, wear respiratory protection.

**P342+P311** if experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

H317

**P272** Contaminated work clothing should not be allowed out of the work place.

**P333+P313** IF ON SKIN: Wash with plenty of soap and water.

**P363** Wash contaminated clothing before reuse.

H225

**P210** Keep away from heat, flames, and hot surfaces. No smoking.

**P233** Keep container tightly closed.

**P241** Use explosive-proof equipment.

**P242** Use only non-sparking tools.

**P243** Take precautionary measures against static discharge.

**P303 + P361 + P353** If on skin (or hair) take off immediately all contaminated clothing. Rinse skin with water.

**P370 + P378** In case of fire use ..... to extinguish.

**P403 + P235** Store in a well-ventilated place. Keep cool.

Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
7646-85-7	Zinc Chloride	0.113 v/v
67-63-0	Isopropyl Alcohol	50 v/v
50-00-0	Formaldehyde	11 v/v
7732-18-5	Water	Balance

Section 4 - First Aid Measures

**Eye Exposure:** In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

**Dermal Exposure:** In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes.

**Oral Exposure:** If Swallowing seek immediate medical advice.

**Inhalation Exposure:** If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

Section 5 - Fire Fighting Measures

**General Information:** Containers can build up pressure if exposed to heat and/or fire. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Flammable Liquid. Can release vapors that form explosive mixtures at temperatures above the flashpoint. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire.

**Extinguishing Media:** For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water.

Isopropyl Alcohol

**Flash Point:** Closed Cup: 11.667 deg. C (53 deg F)

**Auto ignition Temperature:** 399 deg C (750.2 deg F)

**Explosion Limits, Lower:** 2 vol %

**Upper:** 12.7 vol %

**NFPA Rating:** (estimated) Health: 2; Flammability: 3; Instability: 0

Section 6 - Accidental Release Measures

**Procedure(s) of Personal Precaution(s):**

Wear protective gear. Eliminates all sources of ignition.

**Methods for Cleaning up:** Absorb with sand, earth or vermiculite. Carefully sweep up and containerize for proper disposal.

Section 7 - Handling and Storage

Use care when handling. Wash thoroughly after handling. Store capped at room temperature. Keep away from incompatible materials. Protect from heat. Vapors heavier than air, may travel considerable distance and ignite or explode.

Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

**Exposure Limits**

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Formaldehyde		200 ppm TWA	200 ppm

	A2 Carcinogenic effects. 0.3 ppm		
Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Isopropanol	400 ppm TWA	500 ppm TWA; 400 mg/m <sup>3</sup> TWA 500 ppm IDLH	980 ppm TWA; 1900 mg/m <sup>3</sup> TWA

**OSHA Vacated PELs:**

**Personal Protective Equipment**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Section 9 - Physical and Chemical Properties

**Physical State:** Liquid

**Appearance:** clear

**Odor:** Alcohol-like

**pH:** N/A

**Vapor Pressure:** N/A

**Vapor Density:** N/A

**Evaporation Rate:** N/A

**Viscosity:** N/A

**Boiling Point:** N/A

**Freezing/Melting Point:** N/A

**Decomposition Temperature:** N/A

**Solubility:** Soluble.

**Specific Gravity/Density:** N/A

Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Incompatible materials, ignition sources, excess heat, oxidizers.

**Incompatibilities with Other Materials:** Reactive with oxidizing agents, acids, Alkalis.

**Hazardous Decomposition Products:** Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

**Hazardous Polymerization:** Will not occur.

**Special Remark on Reactivity for Isopropyl Alcohol.**

Reacts Violently with hydrogen and palladium combination.

## Section 11 - Toxicological Information

**RTECS#:**

**CAS#** 7646-85-7

**LD50/LC50:**

CAS# 7646-85-7:

Oral rat LD50: 350 mg/kg

Oral mouse LD50: 329 mg/kg

**CAS#** 67-63-0

**LD50/LC50:**

CAS# 67-63-0:

Oral rat LD50: 5045 mg/kg

Oral mouse LD50: 3600 mg/kg

Oral rabbit LD50: 6410 mg/kg

Dermal rabbit LD50: 12800 mg/kg

**CAS#** 50-00-0

Mouse oral: 260 mg/kg

Rabbit skin: 64000/ 4 H

Mouse inhalation: 64000/ 8 hours.

**Solution Carcinogenicity:**

Formaldehyde is listed by ACGIH, IARC: Group 1 (Carcinogenic to humans), NTP and CA Prop 65.

## Section 12 - Ecological Information

**Ecotoxicity:** N/A

**Environmental:** When released to the atmosphere it will photo degrade in hours (polluted urban atmosphere) to an estimated range of 4 to 6 days in less polluted areas. Rainout should be significant.

**Physical:** No information available.

**Other:** No information available.

## Section 13 - Disposal Considerations

**Appropriate method of disposal of substance or preparation:**

Dispose of in accordance with all federal state and local regulations.

## Section 14 - Transport Information

**DOT**

Proper shipping name: Isopropanol

UN1219

PG II

Hazard class 3 (flammable)

Section 15 - Regulatory Information
-------------------------------------

**Canada Regulatory Information**

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the SDS contains all the information required by the CPR.

**California Prop 65**

WARNING: Formaldehyde, is a chemical known to the state of California to cause cancer.

**European/International Regulations****European Labeling in Accordance with EC Directives****Hazard Symbols:**

F

**Risk Phrases:**

R 11 Highly flammable.

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed

R36/38 Irritating to eyes and skin

**R51** Toxic to aquatic organisms

**Safety Phrases:**

S20/21 When using do not eat, drink or smoke

S2 Keep out of the reach of children

S 16 Keep away from sources of ignition - No smoking.

S 33 Take precautionary measures against static discharges.

S 7 Keep container tightly closed.

S 9 Keep container in a well-ventilated place

Section 16 - Additional Information
-------------------------------------

**MSDS Creation Date:** 11/1/12

**Revision #1.** 3/14/16 RC

Rev. # 1 Change from MSDS to SDS

Rev. # 2 Change statement on section 13

Ruth Chabot. 3/14/16

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Rowley Biochemical, Inc. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Rowley Biochemical, Inc. has been advised of the possibility of such damages.*