

# Safety Data Sheet

## FORMALDEHYDE 37-40%

### Section 1 - Chemical Product and Company Identification

**SDS Name:** Formaldehyde 37-40%

**Catalog Numbers:** F-110

**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  
H341-Germ Cell Mutagenicity: 2  
H350-Carcinogenicity: 1A  
H361-Reproductive Toxicity: 2  
H371-Specific Target Organ Toxicity: 2

##### PHYSICAL HAZARDS

H225-Flammability: 2

##### ENVIRONMENTAL HAZARDS

H402-Aquatic acute environmental Hazards: 3

## Pictograms or Hazard symbols and Hazard statement.



Danger: Toxic if swallowed.



Danger: Causes serious eye damage.



Harmful to aquatic life



**Danger:** Highly flammable liquid and vapour.



**Warning:** Harmful if inhaled.  
Causes skin irritation.  
May cause allergic skin reaction.



**Causes cancer.**

May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
**Chronic:** Oral, Human – woman: May cause reproductive and fetal effects.  
Prolonged exposure may cause liver, kidney, and heart damage.

## **Precautionary Statement Prevention.**

### 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.

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

**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.

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

## **Precautionary Statement Prevention**

### H301

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

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

### 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.

### 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.

### H319

**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.

**P304+P341 IF INHALED:** if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

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

### H332

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

**P27 P304 + P340** If inhaled, remove person to fresh air and keep comfortable for breathing.

1 Use only outdoors or in a well-ventilated area.

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

H341+H361

**P201** Obtain special instructions before use.

**P202** Do not handle until all safety precautions have been read and understood.

**P281** Use personal protective equipment as required.

**P308 + P313** If exposed or concerned, get medical advice/attention.

**P405** Store locked up.

H350

**P201** Obtain special instructions before use

**P202** Do not handle until all safety precautions have been read and understood.

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

H371

**P260** Do not breathe fume/gas/mist/vapors.

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

**P309+P311** IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician

**WARNING!** Contains methanol; not for internal or external use.

Section 3 - Composition, Information on Ingredients

| CAS#      | Chemical Name  | Percent |
|-----------|----------------|---------|
| 67-56-1   | Methyl alcohol | 10-15   |
| 50-00-0   | Formaldehyde   | 36.5-38 |
| 7732-18-5 | Water          | 47-53.5 |

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.

**Flash Point:** CLOSED CUP: 50°C (122f). OPEN CUP: 60°C (140F)

**Auto ignition Temperature:** 430 deg C ( 806 deg F)

**Flammable Limits, Lower:**6% **Upper:** 36.5 % (Methyl alcohol)

**Product of Combustion:** These products are carbon oxides (CO, CO2)

**NFPA Rating:** (estimated) Health: 2; Flammability: 2; 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  |
|----------------|--|--|--|
| Methyl alcohol | 200 ppm TWA;<br>250 ppm STEL;<br>skin - potential<br>for cutaneous<br>absorption | 200 ppm TWA;<br>260 mg/m <sup>3</sup> TWA<br>6000 ppm IDLH | 200 ppm TWA; 260 mg/m <sup>3</sup> TWA   |
| Formaldehyde   | 0.3 ppm Ceiling  | 0.016 ppm TWA<br>20 ppm IDLH                               | 0.75 ppm TWA; 2 ppm STEL; 0.5<br>ppm Action Level; Irritant and<br>potential cancer hazard (29 CFR<br>1910.1048) |
| Odor mask      | none listed  | none listed  | none listed  |
| Water          | none listed  | none listed  | none listed  |

### 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:** Pungent. Suffocating (Strong)

Molecular Weight: 30.02

**pH:** 3

**Boiling Point:** 98 deg. C (208.4F)

**Melting Point:** -15 deg. C (5F)

**Critical Temperature:** The lowest Known Value is 240 deg. C (464F) (Methyl alcoholic)

**Specific Gravity:** 1.08

**Vapor Pressure:** 2.4 kPa @ 20 deg. C

**Vapor Density:** 1.03

**Volatility:** 100% (w/v)

**Odor Threshold:** The highest known value is 100 ppm (Methyl alcohol)

**Ionicity (in water):** Non-ionic

**Dispersion Properties:** See solubility in water, diethyl ether, and acetone.

**Solubility:** Easy soluble in cold water, hot water. Soluble in diethyl ether, acetone, alcohol.

## 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:** Strong oxidizing agents, acids, alkali metals, ammonia, hydrazine, peroxides, sodium, acid anhydrides, calcium hypochlorite, chromyl chloride, nitrosyl perchlorate, bromine pentafluoride, perchloric acid, silver nitrate, mercuric nitrate, potassium-tert-butoxide, magnesium perchlorate, acid chlorides, platinum, uranium hexafluoride, silver oxide, iodine heptafluoride, acetyl bromide, disulfuryl difluoride, tetrachlorosilane + water, acetyl chloride, permanganic acid, ruthenium (VIII) oxide, uranyl perchlorate, potassium dioxide.

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

**Hazardous Polymerization:** Will not occur.

## Section 11 - Toxicological Information

**RTECS#:**

**LD50/LC50:**

CAS# 67-56-1

Oral, mouse: LD50 = 5628 mg/kg;

Dermal, rabbit: LD50 = 15800 mg/kg;

Vapor, rat: LC50 = 64000 ppm 4 hours

**Carcinogenicity:**

CAS# 67-56-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 50-00-0

Mouse oral: 260 mg/kg

Rabbit skin: 64000/ 4 H

Mouse inhalation: 64000/ 8 hours.

**Solution Carcinogenicity:**

CARCINOGENIC EFFECTS: Classified A2 (Suspected for human) by ACGIH. 2A (Probable for human.) by IARC. Cause cancer in human by CA Prop 65.

**Teratogenicity:** Classified POSSIBLE for human (Methyl alcohol)

**Developmental Toxicity:** May cause damage to the following organs: Kidney, liver, central nervous system (CNS)

**Mutagenicity:** For mammalian somatic cells (Formaldehyde and Methyl alcohol)

**Other Studies:**

Exposure to Formaldehyde and Methanol may cause adverse reproductive effects and birth defects. **SEVERE OVER-EXPOSURE CAN RESULT IN DEATH.**

Section 12 - Ecological Information

**Ecotoxicity:** Not available.

**Products of Biodegradation:** Possibly hazardous short term degradation products of the degradation are less toxic than the product itself.

**Biodegradation:** The half-life of methanol in surface water ranges from 24 hrs. to 168 hrs. Methanol is physically removed from air by rain due to its solubility. Methanol can react with NO<sub>2</sub> in polluted air to form methyl nitrate.

Section 13 - Disposal Considerations

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

Handled as hazardous waste and sent to an RCRA approved incinerator or disposed in an RCRA approved waste facility.

Section 14 – Transport Information

|                       | US DOT                             | IATA | RID/ADR | IMO | Canada TDG                |
|-----------------------|------------------------------------|------|---------|-----|---------------------------|
| <b>Shipping Name:</b> | FORMALDEHYDE, SOLUTIONS, FLAMMABLE |      |         |     | No information available. |
| <b>Hazard Class:</b>  | 3,8                                |      |         |     |                           |
| <b>UN Number:</b>     | UN1198                             |      |         |     |                           |
| <b>Packing Group:</b> | III                                |      |         |     |                           |



## 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

R61 May cause harm to the unborn child

#### 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. 12/4/14 RC**

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