

# Safety Data Sheet

## ZINC FORMALIN WITH ZINC SULFATE

### Section 1 - Chemical Product and Company Identification

**SDS Name:** Zinc Formalin with Zinc Sulfate

**Catalog Numbers:** SO-579, A-118-1, A-119-1, F-202, F-395-9

**Company Identification:** Transene Company, Inc., DBA ROWLEY BIOCHEMICAL, Inc.  
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

H301-Acute toxicity, oral: 3

H311-Acute toxicity, dermal: 3

H315-Skin corrosion/irritation: 2

H317-Sensitisation, skin: 1

H318-Serious eye damage/eye irritation: 1

H331-Acute toxicity, inhalation: 3

H341-Germ cell mutagenicity: 2

H350-Carcinogenicity: 1A

H370-Specific target organ toxicity, single exposure: 1

H372-Specific target organ toxicity, repeated exposure: 1

H402-Hazardous to the aquatic environment, acute toxicity: 3

#### Pictograms or Hazard symbols and Hazard statement(s):



Signal Word: Danger

## **Hazard Statements:**

H301-Toxic if swallowed  
H311-Toxic in contact with skin  
H315-Causes skin irritation  
H317-May cause an allergic skin reaction  
H318-Causes serious eye damage  
H331-Toxic if inhaled  
H341-Suspected of causing genetic defects  
H350-May cause cancer  
H370-Causes damage to organs (target organs: respiratory system, central nervous system, optic nerve)  
H372-Causes damage to organs through prolonged or repeated exposure (target organs: kidney, liver, heart, spleen, blood)  
H402-Harmful to aquatic life

## **Precautionary Statements:**

P201-Obtain special instructions before use.  
P202-Do not handle until all safety precautions have been read and understood.  
P260-Do not breathe dust/fume/gas/mist/vapours/spray.  
P261-Avoid breathing dust/fume/gas/mist/vapours/spray.  
P264-Wash thoroughly after handling.  
P270-Do not eat, drink, or smoke when using this product.  
P271-Use only outdoors or in a well-ventilated area.  
P272-Contaminated work clothing should not be allowed out of the workplace.  
P273-Avoid release to the environment.  
P280-Wear protective gloves/eye protection/face protection/protective clothing.  
P281-Use personal protective equipment as required.  
P301+P310-If swallowed: Immediately call a Poison Center or doctor/physician.  
P302+P352-If on Skin: Wash with plenty of soap and water.  
P304+P340-If Inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305+P351+P338-If in Eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P307+P311-If exposed: Call a Poison Center or doctor/physician.  
P308+P313-If exposed or concerned: Get medical advice/attention.  
P310-Immediately call a Poison Center or doctor/physician.  
P311-Call a Poison Center or doctor/physician.  
P312-Call a Poison Center or doctor/physician if you feel unwell.  
P314-Get medical advice/attention if you feel unwell.  
P330-Rinse mouth.  
P332+P313-If skin irritation occurs: Get medical advice/attention.  
P333+P313-If skin irritation or rash occurs: Get medical advice/attention.  
P361-Remove/Take off immediately all contaminated clothing.  
P362-Take off contaminated clothing and wash before reuse.  
P363-Wash contaminated clothing before reuse.  
P403+P233-Store in a well-ventilated place. Keep container tightly closed.  
P405-Store locked up.  
P501-Dispose of contents/container in accordance with local/regional/national/international regulations.

### Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
7446-20-0	Zinc Sulfate Heptahydrate	1 w/v
50-00-0	Formaldehyde	1.4-1.5 v/v
67-56-1	Methyl Alcohol	0.4-0.6 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. Seek medical attention.

**Oral Exposure:** If swallowed, seek immediate medical advice.

**Inhalation Exposure:** If inhaled, remove to fresh air. Immediate medical attention is required.

### Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating gases may be generated by thermal decomposition or combustion.

**Extinguishing Media:** Use dry chemical, carbon dioxide, dry sand, water spray, or alcohol-resistant foam.

**Hazardous Combustion Products:** Carbon oxides, sulfur oxides, hydrogen, formaldehyde, irritating toxic fumes and gases.

**Flash Point:** Not available

**Auto-ignition Temperature:** Not available

**Explosion Limits, Lower:** Not available

**Upper:** Not available

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

### Section 6 - Accidental Release Measures

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

Wear personal protective equipment. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Ensure adequate ventilation.

**Methods for Cleaning up:** Absorb with sand, earth, or vermiculite. Carefully sweep up and containerize for proper disposal. Do not release to the environment. Do not release to drains.

## Section 7 - Handling and Storage

Use care when handling. Wear personal protective equipment. Ensure adequate ventilation. Wash thoroughly after handling. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Store in a tightly closed container at room temperature. Keep away from incompatible materials.

## 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.

### 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.

### Exposure Limits:

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Zinc Sulfate Heptahydrate CAS#7446-20-0	None Listed	None Listed	None Listed
Formaldehyde, 37-40% CAS#50-00-0	0.1 ppm TWA 0.3 ppm STEL	20 ppm IDLH 0.016 ppm TWA 0.1 ppm Ceiling	0.75 ppm TWA 2 ppm STEL
Methyl Alcohol CAS#67-56-1	200 ppm TWA 250 ppm STEL	6000 ppm IDLH 200 ppm TWA 260 mg/m3 TWA 250 ppm STEL 325 mg/m3 STEL	200 ppm TWA 260 mg/m3 TWA

**OSHA Vacated PELs:** Formaldehyde, 37-40%: 10 ppm STEL; 3 ppm TWA; 5 ppm Ceiling  
Methyl Alcohol: 200 ppm TWA; 260 mg/m3 TWA; 250 ppm STEL;  
325 mg/m3 STEL

## Section 9 - Physical and Chemical Properties

**Physical State:** Liquid  
**Appearance:** Clear  
**Odor:** Formaldehyde, pungent  
**Vapor Pressure:** Not available  
**Odor threshold:** Not available  
**Vapor Density:** Not available  
**pH:** 3.75-4.75  
**Relative density:** Not available  
**Melting point/freezing point:** Not available  
**Solubility:** Soluble in water  
**Boiling Point:** Not available  
**Flash point:** Not available  
**Evaporation Rate:** Not available  
**Flammability (solid, gas):** Not available  
**Partition coefficient: n-octanol/water:** Not available  
**Auto-ignition temperature:** Not available  
**Decomposition temperature:** Not available  
**Viscosity:** Not available  
**Specific Gravity/Density:** Not available

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.  
**Conditions to Avoid:** Incompatible materials, ignition sources, excess heat, and freezing.  
**Incompatible Materials:** Strong oxidizing agents, strong bases, nitriles, acids, isocyanates, acid anhydrides, metals, and acid chlorides.  
**Hazardous Decomposition Products:** Carbon oxides, sulfur oxides, hydrogen, formaldehyde, irritating toxic fumes and gases.

## Section 11 - Toxicological Information

**CAS#7446-20-0 Zinc Sulfate Heptahydrate: RTECS#: ZH5300000**

LD50 Oral: 1260 mg/kg (rat)  
LD50 Dermal: Not available  
LC50 Inhalation: Not available

**Carcinogenicity:** Zinc Sulfate Heptahydrate CAS#7446-20-0 is not listed by IARC, NTP, ACGIH, OSHA, or California Prop 65.

**CAS#50-00-0 Formaldehyde, 37-40%: RTECS#: LP8925000**

LD50 Oral: 500 mg/kg (rat)  
LD50 Dermal: 270 mg/kg (rabbit)  
LC50 Inhalation: 0.578 mg/L (rat) 4h

**Carcinogenicity:** Formaldehyde, 37-40% CAS#50-00-0 is listed by ACGIH (A1 Known Human Carcinogen), IARC (Group 1, Carcinogenic to Humans), and NTP (Known Carcinogen). Formaldehyde is listed by California Prop. 65 as a developmental hazard.

**CAS#67-56-1 Methyl Alcohol:**

LD50 Oral: >1187-2769 mg/kg (rat)  
LD50 Dermal: 17100 mg/kg (rabbit)  
LC50 Inhalation: 128.2 mg/L (rat) 4h

**Carcinogenicity:** Methyl Alcohol CAS#67-56-1 is not listed by IARC, NTP, ACGIH, or OSHA. Methyl Alcohol is listed by California Prop. 65 as a developmental carcinogen.

**Epidemiology:** Not available

**Teratogenicity:** Teratogenic effects have occurred in experimental animals with Formaldehyde.

**Reproductive Effects:** Experiments with Zinc Sulfate and Formaldehyde have shown reproductive toxicity effects on laboratory animals.

**Neurotoxicity:** Not available

**Mutagenicity:** Mutagenic effects have occurred in humans with Formaldehyde.

**Specific Target Organ Toxicity, Single Exposure:** Respiratory system, central nervous system, and optic nerve.

**Specific Target Organ Toxicity, Repeated Exposure:** Kidney, liver, heart, spleen, and blood.

Note: Formaldehyde causes burns by all exposure routes.

Note: Tumorigenic effects have been reported in experimental animals with Zinc Sulfate.

**The toxicological properties of this material have not been thoroughly investigated.**

Section 12 - Ecological Information
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**Ecotoxicity:** Do not release to the environment. Do not release to drains. Toxic to aquatic life. May cause long-term adverse effects to the aquatic environment.

**CAS#7446-20-0 Zinc Sulfate Heptahydrate:**

LC50, freshwater fish: 1.9 mg/L 96h

**CAS# 50-00-0 Formaldehyde, 37-40%:**

LC50, freshwater fish: 15 mg/L 96h (leuciscus idus)  
EC50, water flea: 20 mg/L 96h ; 2 mg/L 48h

**CAS#67-56-1 Methyl Alcohol:**

LC50, freshwater fish: >10000 mg/L 96h (pimephales promelas)  
EC50, microtox: 39000 mg/L 25min  
EC50, microtox: 40000 mg/L 15min  
EC50, microtox: 43000 mg/L 5min  
EC50, water flea: >10000 mg/L 24h

**Persistence and degradability:** Not available

**Bio-accumulative potential:** Not available

**Mobility:** Will likely be mobile in the environment due to its water solubility.

## Section 13 - Disposal Considerations

**DISPOSAL:** Dispose of in accordance with all federal, state, and local regulations.

## Section 14 – Transport Information

**DOT**

Non-regulated

## 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.

## Section 16 - Additional Information

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

**Revision #1** 5/28/14 YM

**Revision #2** 12-30-21

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