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CHEMTREC Emergency Response Telephone Number: (800)424-9300

Note: The CHEMTREC phone number is only for emergencies involving spills, leaks, fire, exposure or accident. Please direct all other inquiries to our customer service phone number.

### Section I - Product Identification

An aqueous solution of formaldehyde, zinc chloride and acetic acid.

### Section II - Hazards Identification

Danger: may cause cancer. Wear protective clothing, eye and face protection. Causes skin irritation. Wash thoroughly after handling. If swallowed: rinse mouth and immediately contact a poison control center. Remove contaminated clothing and rinse skin with water.

#### Safety Ratings

Health: Hazardous Flammability: None Reactivity: None Contact: Slight

Recommended safety equipment: safety goggles, lab coat and proper gloves

Storage: General storage

NFPA Ratings

Health = 2 Flammability = 0 Reactivity = 0



#### Potential Health Effects

Inhalation of formaldehyde can lead to congestion, coughing and shortness of breath. Frequent skin contact leads to drying and scaling. Ingestion will damage the throat, stomach and intestines resulting in nausea, vomiting, abdominal pain and diarrhea. Lowered blood pressure, spontaneous abortion, loss of consciousness and kidney damage may result. Inhalation of high concentrations of vapor (14 ppm) have caused cancer in laboratory animals. Genetic damage in bacteria has been demonstrated.

*Inhalation:* Irritating to respiratory tract. May cause asthma like symptoms in sensitive individuals.

*Ingestion:* Can cause irritation and chemical burns to the mouth, throat, esophagus and stomach. Can also cause nausea, vomiting, diarrhea, etc.

*Skin contact:* May cause skin irritation or aggravation of existing dermatitis. May cause temporary discoloration of the skin.

*Eye contact:* Vapors may cause stinging sensation and tearing. Solution contact can cause corneal injury which can cause visual impairment if not dealt with immediately.

*Aggravation of preexisting conditions:* May aggravate preexisting asthma and other lung diseases.

### Section III - Composition/Information on Components

| Ingredients   | CAS#      | OSHA PeI                   | ACGIH TLV                  | Other Limits | %        |
|---------------|-----------|----------------------------|----------------------------|--------------|----------|
| Formaldehyde  | 50-00-0   | 0.75 ppm (TWA)             | 0.3 ppm (CEIL)             |              | 2.2% w/v |
| Methanol      | 67-56-1   | 200 ppm (TWA)              | 250 ppm (STEL)             |              | 0.7% v/v |
| Acetic acid   | 64-19-7   | 25 mg/m <sup>3</sup> (TWA) | 25 mg/m <sup>3</sup> (TWA) |              | 1.0% v/v |
| Zinc chloride | 7646-85-7 | 1 mg/m <sup>3</sup> (TWA)  | 1 mg/m <sup>3</sup> (TWA)  |              | 3% w/v   |

### Section IV - First Aid Measures

*Inhalation:* Remove from source of exposure and get medical attention for any breathing difficulty.

*Ingestion:* Drink large quantities of fluids and call a physician immediately. Administer activated charcoal or other adsorbent if available.

*Skin Contact:* Wash affected area with soap and water. Get medical advice if irritation develops.

*Eye Contact:* Immediately flush thoroughly with running water for at least 15 minutes. Get immediate medical advice.

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## Section V - Fire Fighting Measures

*Flash point:* Not applicable.

*Flammable Limits:* Not applicable.

*Fire:* Not normally a fire Hazard.

*Explosion:* Not Normally an explosion hazards.

*Fire Extinguishing Media:* Any means suitable for surrounding fire.

*Special information:* Pyrolysis will release corrosive oxides.

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## Section VI - Accidental Release Measures

Wear appropriate protective gear such as gloves, apron and protective eye wear. Absorb with a suitable absorbent (such as paper towels) and store in a suitable container for disposal. Large spills may be neutralized with formalin neutralizers.

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## Section VII - Handling and Storage

Store in a closed container at controlled room temperature, 59°F to 86°F (15°C to 30°C).

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## Section VIII - Exposure Control/Personal Protection

*Airborne Exposure Limits:* See section II.

*Ventilation System:* Use appropriate ventilation. Laboratory fume hoods or similar apparatus are recommended for handling formaldehyde solutions. When required, Refer to the ACGIH document, "Industrial Ventilation, a Manual of Recommended Practices" for details about ventilation.

*Personal Respirator:* Required if threshold limit value for formaldehyde is exceeded. In case of emergency, or when exposure levels are unknown, use a half face or full face respirator with organic vapor cartridges.

*Skin protection:* Chemical resistant gloves are recommended.

*Eye Protection:* Laboratory safety goggles, safety glasses or face shield are required.

People who regularly work with formaldehyde are required to have regular medical surveillance.

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## Section IX - Physical and Chemical Properties

*Boiling Point:* 100°C

*Vapor pressure (mm Hg):* 18 @ 20°C

*Vapor Density (air = 1):* 0.6

*Appearance and Odor:* A clear liquid with the pungent odor of formaldehyde.

*Density:* About 1.02 g/ml

*Evaporation Rate (water = 1):* 1

*Solubility:* Infinitely miscible with water

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## Section X - Stability and Reactivity

*Stability:* Freezes at low temperature.

*Hazardous Decomposition Products:* Nothing unusual.

*Hazardous polymerization:* Will not occur.

*Incompatibilities:* Nothing unusual.

*Conditions to avoid:* Excessive cold/heat and light.

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## Section XI - Toxicological Information

*Toxicity:* The chronic toxicity of this product is unknown but may include sensitization in sensitive individuals. The manufacturer is unaware of any target organ toxicity. Formaldehyde is a known human carcinogen

*Cancer list*

| <u>Ingredient</u> | <u>Known Carcinogenicity?</u> | <u>Anticipated?</u> | <u>IARC Category</u> |
|-------------------|-------------------------------|---------------------|----------------------|
| Formaldehyde      | yes                           | yes                 | 2A                   |
| Methanol          | no                            | no                  | none                 |
| Zinc chloride     | no                            | no                  | none                 |
| Acetic acid       | no                            | no                  | none                 |

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## Section XII - Ecological Information

*Environmental Fate:* Not biodegradable.

*Environmental Toxicity:* Zinc salts are toxic to fish.

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## Section XIII - Disposal Considerations

Incineration is the preferred disposal method for formaldehyde. Local governments usually restrict the amounts of zinc and/or aldehydes that may be flushed down drain. Dispose of contents and container in accordance with all government regulations.

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**Section XIV - Transportation Information**

Not regulated.

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**Section XV - Regulatory Information****Chemical Inventory Status**

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| <u>Ingredient</u> | <u>TSCA</u> | <u>EC</u> |
|-------------------|-------------|-----------|
| Formaldehyde      | Yes         | Yes       |
| Methanol          | Yes         | Yes       |
| Zinc Chloride     | Yes         | Yes       |
| Acetic Acid       | Yes         | Yes       |

**Federal, State and International Regulations**

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| <u>Ingredient</u> | <u>SARA 302</u> |            | <u>SARA 313</u> |                 | <u>RCRA</u>   | <u>TSCA</u> | <u>Ca. Prop 65</u> |
|-------------------|-----------------|------------|-----------------|-----------------|---------------|-------------|--------------------|
|                   | <u>RQ</u>       | <u>TPQ</u> | <u>List</u>     | <u>Category</u> | <u>261.33</u> | <u>8(D)</u> |                    |
| Formaldehyde      | 100             | 500        | Yes             | No              | U122          | No          | Yes                |
| Methanol          | No              | No         | Yes             | No              | U154          | No          | Yes                |
| Zinc Chloride     | No              | No         | Zinc compound   |                 | No            | No          | No                 |
| Acetic Acid       | No              | No         | No              | No              | No            | No          | No                 |

| <u>Ingredient</u> | <u>Chemical Weapons Convention</u> | <u>TSCA 12(b)</u> | <u>CDTA</u> |
|-------------------|------------------------------------|-------------------|-------------|
| Formaldehyde      | No                                 | No                | No          |
| Methanol          | No                                 | No                | No          |
| Zinc Chloride     | No                                 | No                | No          |
| Acetic Acid       | No                                 | No                | No          |

**SARA 311/312**

| <u>Ingredient</u> | <u>Acute?</u> | <u>Chronic?</u> |
|-------------------|---------------|-----------------|
| Formaldehyde      | Yes           | Yes             |
| Methanol          | Yes           | Yes             |
| Zinc Chloride     | Yes           | Yes             |
| Acetic Acid       | Yes           | No              |

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**Section XVI - Other Information**

This information is believed to be correct but is not warranted as such, nor does it purport to be all inclusive.

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