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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 1 - Product Identification

An aqueous solution of formic acid, formaldehyde and methanol.

## Section II - Composition/Information on Components

| Ingredients  | CAS#    | OSHA Pel       | ACGIH TLV      | Other Limits | %    |
|--------------|---------|----------------|----------------|--------------|------|
| formic acid  | 64-18-6 | 5 ppm (TWA)    | 5 ppm (TWA)    |              | 11%  |
| formaldehyde | 50-00-0 | 0.75 ppm (TWA) | 0.3 ppm (CEIL) |              | 2%   |
| methanol     | 67-56-1 | 200 ppm (TWA)  | 250 ppm (STEL) |              | 0.5% |

## Section III - Hazards Identification

Overview: Harmful if swallowed. Fumes are irritating to skin eyes and respiratory tract.

### Safety Ratings

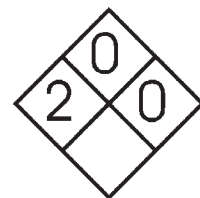
*Health:* Hazardous *Flammability:* Slight *Reactivity:* None *Contact:* Slight

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

Storage: General storage

NFPA Ratings

Health = 2 Flammability = 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.

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## 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 (method used):* Not applicable

*Flammable Limits:* Not applicable

*Extinguishing Media:* Dry chemical, carbon dioxide or alcohol type foam.

*Special Fire Fighting Procedures:* Use self-contained breathing apparatus and full protective clothing.

*Unusual Fire And Explosion Hazards:* Pyrolysis will release toxic compounds such as carbon monoxide and formaldehyde.

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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:* 98 - 99°C

*Vapor pressure (mm Hg):* 18 @ 20°C

*Vapor Density (air = 1):* 1

*Appearance and Odor:* Clear colorless solution. Characteristic odors of formaldehyde and formic acid.

*Specific Gravity:* 1.03

*Evaporation Rate (water = 1):* 1

*Solubility In Water:* Complete

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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 lists

| <i>Ingredient</i> | <i>Known Carcinogenicity?</i> | <i>NTP?</i> | <i>Anticipated?</i> | <i>IARC Category</i> |
|-------------------|-------------------------------|-------------|---------------------|----------------------|
| formaldehyde      | yes                           | no          | yes                 | 2A                   |
| methanol          | no                            | no          | no                  | none                 |
| formic acid       | no                            | no          | no                  | none                 |

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## Section XII - Ecological Information

Environmental Fate: Biodegradable

Environmental Toxicity: Formaldehyde is expected to be slightly toxic to fish.

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## Section XIII - Disposal

Incineration is the preferred disposal method for formaldehyde. Local governments often restrict the amounts of aldehydes that may be flushed down drain. Insure compliance with all government regulation

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## Section XIV - Transportation information

Not Regulated

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## Section XV - Regulatory Information

### Chemical Inventory Status

| Ingredient   | TSCA | EC  |
|--------------|------|-----|
| Formaldehyde | Yes  | Yes |
| Methanol     | Yes  | Yes |
| Formic Acid  | Yes  | Yes |

### Federal, State and International Regulations

|              | SARA 302                    |     | SARA 313 |            | RCRA   | TSCA |
|--------------|-----------------------------|-----|----------|------------|--------|------|
| Ingredient   | RQ                          | TPQ | List     | Category   | 261.33 | 8(D) |
| formaldehyde | 100                         | 500 | Yes      | No         | U122   | No   |
| methanol     | No                          | No  | Yes      | No         | U154   | No   |
| formic acid  | No                          | No  | Yes      | No         | U123   | No   |
| Ingredient   | Chemical Weapons Convention |     |          | TSCA 12(b) | CDTA   |      |
| formaldehyde | No                          |     |          | No         | No     |      |
| methanol     | No                          |     |          | No         | No     |      |
| formic acid  | No                          |     |          | No         | No     |      |
| SARA 311/312 |                             |     |          |            |        |      |
| Ingredient   | Acute?                      |     | Chronic? | Fire?      |        |      |
| formaldehyde | Yes                         |     | Yes      | No         |        |      |
| methanol     | Yes                         |     | Yes      | Yes        |        |      |
| formic acid  | Yes                         |     | Yes      | Yes        |        |      |

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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.

Revision Date: Feb. 22, 2006