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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 I - Product Identification

An aqueous solution of formaldehyde and methanol. Formaldehyde is a gas at room temperature and 1 atm of pressure. The 37% solution is a saturated solution of formaldehyde in water and is commonly called formalin. The methanol is present to prevent polymerization.

## Section II - Hazards Identification

Inhalation 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

### Safety Ratings

Health: Hazardous Flammability: Slight Reactivity: Slight Contact: Slight

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

Storage: General storage

NFPA Ratings

Health = 2 Flammability = 2 Reactivity = 1



### Potential Health Effects

*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 PEL       | ACGIH TLV      | Other Limits | %            |
|--------------|---------|----------------|----------------|--------------|--------------|
| Formaldehyde | 50-00-0 | 0.75 ppm (TWA) | 0.3 ppm (CEIL) |              | 37% w/v      |
| Methanol     | 67-56-1 | 200 ppm (TWA)  | 250 ppm (STEL) |              | 10 - 15% v/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:* 61° - 69° C (142° - 156°F) TCC.

*Flammable Limits:* LEL 7.3%, UEL 73%

*Fire:* Formaldehyde gas is flammable and easily liberated from solution.

*Explosion:* Not Normally an explosion hazards.

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

*Special information:* Pyrolysis will release corrosive oxides 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 III.

*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:* 96°C

*Density:* About 1.08 g/ml

*Vapor pressure (mm Hg):* 1.3 @ 20°C

*Evaporation Rate (water = 1):* 1

*Vapor Density (air = 1):* 1.0

*Solubility:* Infinitely miscible with water

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

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## Section X - Stability and Reactivity

*Stability:* Freezes at low temperature.

*Hazardous Decomposition Products:* Nothing unusual.

*Hazardous polymerization:* Formaldehyde does polymerize to form paraformaldehyde but the reaction is not exothermic to be hazardous.

*Incompatibilities:* Avoid oxidizers and compounds that react with aldehydes.

*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

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

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## Section XII - Ecological Information

*Environmental Fate:* Biodegradable

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

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## Section XIII Disposal Considerations

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

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## Section XIV - Transportation Information

DOT Shipping name: Formaldehyde solution

DOT Hazard Class: 8

Packing Group: III

DOT Hazard Label: Corrosive

DOT Identification Number: UN2209

Bottles smaller than 32 Fl. Oz. are eligible to be shipped under ORM-D or limited quantity exemptions [49 CFR section 173.154(b) and 173.154(C)].

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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       |

### Federal, State and International Regulations

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|                     | <u>SARA 302</u>                    |            | <u>SARA 313</u> |                   | <u>RCRA</u>   | <u>TSCA</u> |                     |
|---------------------|------------------------------------|------------|-----------------|-------------------|---------------|-------------|---------------------|
| <u>Ingredient</u>   | <u>RQ</u>                          | <u>TPQ</u> | <u>List</u>     | <u>Category</u>   | <u>261.33</u> | <u>8(D)</u> | <u>Ca. Prop. 65</u> |
| Formaldehyde        | 100                                | 500        | Yes             | No                | U122          | No          | Yes                 |
| Methanol            | No                                 | No         | Yes             | No                | U154          | No          | Yes                 |
| <u>Ingredient</u>   | <u>Chemical Weapons Convention</u> |            |                 | <u>TSCA 12(b)</u> | <u>CDTA</u>   |             |                     |
| Formaldehyde        | No                                 |            |                 | No                | No            |             |                     |
| Methanol            | No                                 |            |                 | No                | No            |             |                     |
| <u>SARA 311/312</u> |                                    |            |                 |                   |               |             |                     |
| <u>Ingredient</u>   | <u>Acute?</u>                      |            | <u>Chronic?</u> | <u>Fire?</u>      |               |             |                     |
| Formaldehyde        | Yes                                |            | Yes             | Yes               |               |             |                     |
| Methanol            | Yes                                |            | Yes             | Yes               |               |             |                     |

## 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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