

**EMS CATALOG NO: 15675-01**  
**PRODUCT: Formaldehyde/Zinc Fixative**  
**DATE: 04/23/2009**

**MATERIAL SAFETY DATA SHEET**

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FOR PRODUCT AND SALES INFORMATION

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PRODUCT IDENTIFICATION

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PRODUCT NAME: **Formaldehyde/Zinc Fixative**

<b><i>INGREDIENTS:</i></b>	<b><i>CAS NO:</i></b>	<b><i>LD<sub>50</sub>:</i></b>
Formaldehyde	50-00-0	LC50=590 mg/m <sup>3</sup> , rat, ihl
Zinc Sulfate	7446-20-0	LDLQ=2200 mg/kg, rat, oral

Formaldehyde (gas) is listed in the National Toxicology Program's(NTP) Fourth Annual Report on Carcinogens, and is listed by OSHA as a potential human carcinogen.

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## PHYSICAL DATA

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BOILING POINT:	~212°F (100°C)
SPECIFIC GRAVITY:	1.02 at 17°C
VAPOR DENSITY(air=1):	~1
APPEARANCE:	Colorless liquid
ODOR:	Pungent and irritating
SOLUBILITY IN WATER:	Complete
EVAPORATION RATE (Butyl Acetate=1):	<1
MELTING POINT:	N/A

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## FIRE AND EXPLOSION DATA

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FLASH POINT:	>160°F (~71°C)
FIRE/EXPLOSION HAZARDS:	Formaldehyde gas may be released.
EXTINGUISHING MEDIA:	Water, foam, dry chemical or carbon dioxide.

### SPECIAL FIRE FIGHTING INSTRUCTIONS:

Toxic vapors are generated in a fire. Sealed chemical suits and self contained apparatus are necessary for fighting formaldehyde fires.

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## REACTIVITY DATA

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### MATERIALS/CONDITIONS TO AVOID:

Avoid oxidants, hydrogen chloride or hydrochloric acid and formaldehyde gases are reported to form carcinogenic compounds, bis-chloromethyl ether. Alkaline material that raise the pH between 6.8 and 8.0 will cause the precipitation of the zinc.

### HAZARDOUS DECOMPOSITION PRODUCTS:

Upon burning, carbon monoxide and carbon dioxide gases are formed.

HAZARDOUS POLYMERIZATION: None

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## HEALTH HAZARD DATA

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**AIRBORNE EXPOSURE LIMIT:** 0.75 ppm TWA - 1ppm (OSHA TWA-8 hours)

**SYMPTOMS OF OVEREXPOSURE:**

Formaldehyde vapors are irritating to the nose, throat and eyes. Ingestion irritates mouth, throat and stomach causing nausea and vomiting. Formaldehyde solutions are irritating to the skin and can cause eye burns. Formaldehyde is a sensitizer and allergic skin reaction can occur with repeated exposures. Individuals can become acclimated to various formaldehyde vapor concentrations. Long term exposure increased the risk of lung and nasopharyngeal cancer, as well as, asthma.

**PERSONAL PROTECTIVE PROCEDURES EYE PROTECTION:** Use splashproof goggles.

**SKIN PROTECTION:** Use formaldehyde resistant protective clothing to avoid skin contact. OSHA recommends the use of butyl and Nitrile materials.

**RESPIRATORY PROTECTION:**

If formaldehyde vapor concentrations are above permissible exposure levels, use an OSHA approved formaldehyde respirator.

**VENTILATION:** Use mechanical ventilation (exhaust hoods).

**FIRST AID PROCEDURES EYE:**

Immediately flush eyes with lukewarm water for at least 15 minutes. Obtain medical attention immediately.

**SKIN:** Remove contaminated clothing. Wash skin with mild soap and warm water. Flush 15 minutes

**INHALATION:**

If overcome by exposure remove the person to fresh air immediately. Administer oxygen or artificial respiration as needed. Call a physician immediately.

**INGESTION:** Contact poison control center and obtain medical

attention immediately.

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## STORAGE, SPILLS, AND DISPOSAL DATA

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### HANDLING AND STORAGE:

Store only in tightly closed containers. Store at standard room temperatures. Dispose of empty containers properly.

### SPILL PROCEDURE:

Toxic vapors and generated during a spill. Wear appropriate chemical protective clothing to prevent skin contact. Absorb small spills with a sponge. After use thoroughly rinse the sponge with water. During cleanup of a moderate/large spill, meet an OSHA approved formaldehyde respirator. Large spills should be neutralized with sodium bisulfite. Add a small amount of water and mix. Scoop into a suitable chemical disposal container. Wash down the area with a soap solution. Alternatively, use a commercially available detoxification product.

### WASTE DISPOSAL:

Dispose in accordance to Federal, State and local regulations. Disposal of zinc may be done by removal from solution by raising the pH to 7.0-8.0 with a mild alkaline solution(sodium hydroxide). Wait several hours and filter solution.