
MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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| FORMALDETOX-TREATED FORMALIN |
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Reaction product: Solution resulting from the reaction between Formaldetox and waste histological (10%) formalin.

Manufacturer

Anatech Ltd.
1020 Harts Lake Road
Battle Creek, MI 49037
USA

Emergency contact information

| | | | |
|-----------------|--------------|--------------|---------------------|
| Health: | Anatech Ltd. | 800-262-8324 | 8 am - 5 pm ET, M-F |
| Transportation: | CHEMTREC | 800-424-9300 | 24 hours |

2. COMPOSITION AND INFORMATION ON INGREDIENTS

| <u>Component</u> | <u>CAS #</u> | <u>Exposure limits</u> |
|--|--------------------------|--|
| Methanol (< 0.65%) | 67-56-1 | 200 ppm (OSHA, NIOSH, ACGIH 8 hour TWA) 250 ppm (ACGIH Ceiling) 6000 ppm (NIOSH IDLH*) * Immediately dangerous to life and health |
| Formaldehyde (< 0.01% v/v) | 50-00-0 | 0.75 ppm (OSHA 8 hour TWA) 2.0 ppm (OSHA 15 minute STEL) 0.5 ppm (OSHA Action Level) 0.3 ppm (ACGIH Ceiling) 0.1 ppm (NIOSH Ceiling) 20 ppm (NIOSH IDLH*) * Immediately dangerous to life and health |
| Sodium bicarbonate (7.9%) or Sodium carbonate (7.9%) | 144-55-8 497-19-8 | Not established. Not established. |
| Sodium formate (< 4.2%) | 141-53-7 | Not established. |
| Sodium metasilicate (< 1%) | 7722-84-1 | Not established. |

Other ingredients from the original formalin solution may be present; the most likely include:

Neutral buffered formalin

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|---------------------------------|-----------|-------------------------------------|
| Disodium phosphate (4.6% w/w) | 7558-79-4 | Generally considered not hazardous. |
| Monosodium phosphate (1.2% w/w) | 7558-80-7 | Generally considered not hazardous. |

2. COMPOSITION AND INFORMATION ON INGREDIENTS (continued)

Zinc formalin (if zinc was not removed prior to detoxification)

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| Zinc carbonate | 3486-35-9 | Not established. |
| Zinc hydroxide | 20427-58-1 | Not established. |

3. HAZARDS IDENTIFICATION

Emergency overview

Colorless liquid with dense white flocculated precipitate of sodium carbonate.

Not likely to pose a hazard under normal conditions of use. Concentrations of methanol or formaldehyde are too low to be of toxicological significance.

Potential health effects

(Human health effects only.)

Primary route(s) of exposure: Eyes and skin.

Inhalation: None known.

Eye: Contact of liquid may be mildly irritating.

Skin: Contact of liquid with skin may cause irritation.

Ingestion: Effects are unknown but anticipated to be slight.

Chronic effects: None known.

Signs and symptoms: Eyes may water and become reddened. Affected skin will appear dry.

4. FIRST AID MEASURES

Inhalation: Remove victim to fresh air if coughing or difficulty in breathing is experienced. Consult a physician if symptoms persist or worsen. Administer oxygen or artificial respiration as needed.

Eye: Flush eyes for at least 15 minutes in an eyewash station. If symptoms persist after washing, consult a physician.

Skin: Remove contaminated clothing, including footwear; wash before reuse or discard. For minor exposure, wash affected area with water and mild soap, rinsing thoroughly; apply a good quality skin lotion. In cases of prolonged, repeated or extensive exposure, rinse affected area or entire body for at least 15 minutes. For severe conditions, consult a physician.

Ingestion: Call a poison control center immediately. If victim is conscious, have him/her drink several glasses of water to dilute the solution. Induce vomiting only upon the advice of a physician or poison control authority.

5. FIRE FIGHTING MEASURES

Flammable properties

Flash point: Not applicable.

Flammable limit: Not applicable.

Autoignition temperature: Not applicable.

Flammability classification: Nonflammable.

Flame propagation: None.

Hazardous products of combustion: None.

Extinguishing media: ABC rated portable fire extinguishers should be used. Professional fire fighters may use water spray, dry chemical or carbon dioxide.

Fire fighting instructions: Sealed chemical suits and self contained breathing apparatus are necessary for fighting fires involving substantial volumes of this product.

6. ACCIDENTAL RELEASE MEASURES

Use a damp sponge or mop to remove spilled material. Wash contaminated area with water. Discard absorbents and other contaminated solids in a trash receptacle.

Comply with all applicable governmental regulations on spill reporting and on the handling and disposal of hazardous waste.

7. HANDLING AND STORAGE

Handling: No special precautions required.

Storage: Store at room temperature.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering controls: Good general room ventilation is essential.

Personal protective equipment

Respiratory protection: During the detoxification reaction, formaldehyde vapors are liberated as the solution warms up. Keep reaction drum equipped with vapor scrubber. Use under a hood during the reaction. When the reaction is complete, there is no inhalation danger.

Skin protection: When handling/detoxifying formalin, OSHA mandates the use of gloves; Anatech Ltd. recommends nitrile gloves. Do not use latex surgical gloves for protection against any hazardous liquid. An eyewash station and safety shower must be nearby, preferably in the same room, no more than 10 seconds away.

Eye protection: Use splash-proof goggles. Do not use safety glasses. An eyewash station and safety shower must be nearby, preferably in the same room, no more than 10 seconds away.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colorless liquid with white flocculants. Solution turns milky when shaken.

Odor: Resembles solution of baking soda.

Physical state: Liquid.

pH: Variable depending upon the nature of the waste formalin.

Vapor pressure: Not determined.

Vapor density: Not determined.

Boiling point: Not determined.

Solubility in water: Complete.

Specific gravity: 1.08 at 20°C.

10. STABILITY AND REACTIVITY

Chemical stability: Stable.

Conditions to avoid: None.

Incompatibility with other materials: None.

Hazardous decomposition products: None.

Hazardous polymerization: None.

11. TOXICOLOGICAL INFORMATION

Acute eye effects: Eye irritation threshold in humans is 3-10 ppm of formaldehyde; lacrimation and discomfort at lower levels in some individuals; contact with the solution may fix the cornea and surrounding tissue.

Acute skin effects: None known.

Acute oral effects: None known.

Acute inhalation effects: None known.

Chronic effects/carcinogenicity: Formaldehyde is an OSHA carcinogen and sensitizer.

Teratology: None known.

Reproductive effects: None known.

Mutagenicity: Positive (formaldehyde).

12. ECOLOGICAL INFORMATION

No environmental information is known

13. DISPOSAL CONSIDERATIONS

Drain disposal is recommended with the permission of local wastewater treatment authorities.

Canadian disposal regulations generally parallel those in the United States.

Follow federal, state (provincial) and local regulations. Proper waste disposal is the generator's responsibility.

14. TRANSPORTATION INFORMATION

DOT (ground and air) and IATA: Not regulated.

15. REGULATORY INFORMATION

OSHA (USA): Under the Hazard Communication Standard and the Laboratory Standard, this product is not hazardous.

FDA (USA): Not applicable.

EPA (USA): Formaldetox-treated formalin is a reportable substance under SARA Title III.

16. OTHER INFORMATION

NFPA (National Fire Protection Association) Rating:

General note: This rating is applicable only to safeguard the lives of individuals who may be concerned with fires occurring in an industrial plant or storage location. The ratings provide information to emergency personnel on whether to evacuate the area or how to perform control procedures. It is not descriptive of hazards under normal conditions of occupational use, and is even less applicable to anticipated laboratory-scale use.

Health 0: Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.

Flammability 0: Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

Instability 0: Materials that are normally stable even under fire conditions.