

Reveal®
1. Identification
Product Name: Reveal® Lymph Node Revealer

Item #: FX1063, FX1064, FX1065, FX1066, FX1067

Synonyms: N/A

Recommended Use: Lymph Node Detection

Restrictions on Use: N/A

Manufacturer:
In Case of Emergency:

Cancer Diagnostics, Inc.

Chemtrec US 1-800-424-9300

4300 Emperor Blvd. #400

Chemtrec International 703-527-3887

Durham, NC 27703

1-877-846-5393

2. Hazards Identification
OSHA Hazard Classification(s):

Acute Toxicity - Inhalation - Category 4

Acute Toxicity - Oral - Category 4

Skin Corrosion - Category 1A

Eye Damage - Category 1

Sensitization - Respiratory - Category 1A

Sensitization - Skin - Category 1A

Germ Cell Mutagenicity - Category 1B

Carcinogenicity - Category 1A

Specific Target Organ Toxicity (single exposure) - Category 2

Specific Target Organ Toxicity (repeated exposure) - Category 2

Flammable Liquids - Category 2

Signal Word: Danger

Hazard Statement(s): Harmful if inhaled. Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. May cause genetic defects. May cause cancer. May cause damage to organs(lungs, nose, respiratory system). May cause damage to organs (lungs, nose, respiratory system, central nervous system, liver, blood) through prolonged or repeated exposure. Highly flammable liquid and vapor.

Pictogram(s):


Precautionary Statement(s): Prevention: Avoid breathing dust, vapors. Use only outdoors or in a well-ventilated area. Wash body thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dusts or mists. Wear protective gloves, protective clothing, eye protection and face protection. Wear eye protection, face protection. Wear NIOSH approved respiratory protection. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust, vapors.

Response: If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a doctor if you feel unwell. If swallowed: Call a doctor if you feel unwell. Rinse mouth. If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Take off all contaminated clothing and wash it before reuse. Immediately call a doctor. Specific treatment (see first aid section on this label). If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue Rinsing If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a doctor. If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical attention. If exposed or concerned: Get medical attention. If exposed or concerned: Call a doctor.

Storage: Store locked up.

Disposal: Dispose of contents/container in accordance with local regulations.

Descriptions of Hazards not otherwise classified: N/A

Percent of mixture with unknown acute toxicity: N/A

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3. Composition and Information on Ingredients

Chemical Name	Common Name	CAS #	Concentration %
Water		7732-18-5	Trade Secret
Ethyl Alcohol		64-17-5	Trade Secret
Glacial Acetic Acid		64-19-7	Trade Secret
Formaldehyde 37%		50-00-0	Trade Secret

4. First Aid Measures

Eye Contact: Corrosive to eyes, may cause permanent damage. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin Contact: Corrosive to skin, may cause permanent damage. If on skin (or hair): Take off immediately all contaminated clothing and wash before reuse. Wash with plenty of water. If skin irritation occurs: Get medical advice/attention.

Inhalation: Vapor is harmful. Remove to fresh air; give artificial respiration if breathing has stopped. Get medical advice/attention if you feel unwell.

Ingestion: Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.

Symptoms: Irritation eyes, nose, throat, lungs; headache, dizziness, unconsciousness, asphyxiation. . Depression of central nervous system. Burns to eyes and skin. Ingestion may cause blindness. Formaldehyde causes respiratory and skin sensitization such as asthma. Pre-existing respiratory and skin disorders may be aggravated by exposure. May cause lung, kidney, or liver damage.

Recommendations for immediate medical care/special treatment: Get medical advice/attention if you feel unwell.

5. Fire- Fighting Measures

Extinguishing Media: Dry chemical, carbon dioxide, alcohol foam, water. Use water spray to cool fire-exposed containers and disperse vapors.

Fire Hazards (Chemical): OSHA classified Flammable Liquid Category 2

Special Protective Equipment: Fire fighters should use self-contained breathing apparatus and protective clothing.

Precautions for Firefighters: Carbon monoxide and unidentified organic compounds may be formed during combustion. Vapors can travel distances to ignition source and flash back. Cool fire exposed containers with water. Fine mist or spray may be flammable at temperatures below the flash point. When heated above the flash point this material emits flammable vapors which, when mixed with air, can burn or be explosive.

6. Accidental Release Measures

Emergency Procedures: Evacuate the area of all unnecessary personnel. Wear suitable protective equipment. Eliminate all sources of ignition and provide ventilation.

Protective Equipment: See section 8

Environmental Precautions: Prevent release to the environment by using barriers.

Containment and Clean-Up Procedures: Use barriers to prevent spreading. Collect spill in container. Call waste authorities.

7. Handling and Storage

Handling: Do not breathe vapors. Do not eat, drink or smoke when using this product. Keep away from heat, sparks, open flames, hot surfaces. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

Storage: Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

8. Exposure Controls/Personal Protection

OSHA Permissible Exposure Limits (PELs):

Reagent	CAS #	OSHA PEL TWA
Formaldehyde	50-00-0	0.75ppm
Ethyl Alcohol	64-17-5	1000ppm

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Glacial Acetic Acid	64-19-7	10ppm
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ACGIH Threshold Limit Values (TLVs):

Reagent	CAS #	ACGIH PEL TLV	ACGIH STEL
Formaldehyde	50-00-0	0.3ppm (0.37mg/m3) Ceiling	
Ethyl Alcohol	64-17-5	1000ppm	1000ppm
Glacial Acetic Acid	64-19-7	10ppm	15ppm

Engineering Controls: Use in a well ventilated area to prevent exposure. Maintain eyewash fountain and quick-drench facilities in work areas.

Personal Protective Measures: Wear gloves, lab coat, eye protection and impervious footwear. Contact lenses should not be worn when working with this material.

Special PPE Requirements: If ventilation hood not available wear respirator.

9. Physical and Chemical Properties Section

Appearance: Colorless, Liquid

Molecular Weight: N/A

Molecular Formula: N/A

pH: N/A

Boiling Point and Boiling Range: N/A

Melting Point/Freezing Point: N/A

Flash Point: 72°F

Specific Gravity/Relative Density: N/A

Odor: Pungent/Vinous

Odor Threshold: N/A

Color: Colorless

Flammability (solid/gas): N/A

Vapor Density: N/A

Upper/Lower flammability or explosive limits: LEL: 3.3% UEL: 19% (based on ethanol)

Vapor Pressure: N/A

Evaporation Rate: N/A

Partition Coefficient: n-octanol/water: N/A

Viscosity: N/A

Auto-ignition temperature: N/A

Solubility: N/A

Decomposition Temperature: N/A

10. Stability and Reactivity

Reactivity:

Chemical Stability: Stable

Conditions of Stability/Instability: Avoid contact with ignition sources

Stabilizers needed: None

Safety issue indicated by appearance change: N/A

Other: N/A

Hazardous Reactions: N/A

Hazardous Polymerization: Does not occur

Conditions to avoid: N/A

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Classes of Incompatible Materials: Oxidizers, Strong Acids, Strong Bases

Hazardous Decomposition Products: Thermal-oxidation degradation can produce oxides of carbon. Toxic gases and vapors (I.e. Carbon monoxide) may be released in a fire.

11. Toxicological Information**Likely Routes of Exposure**

Eyes: Formaldehyde solution splashed in the eye can cause injuries ranging from transient discomfort to severe, permanent corneal clouding and loss of vision. The severity of the effect depends on the concentration of formaldehyde in the solution and whether or not the eyes are flushed with water immediately after the accident.

Skin: Formaldehyde is a severe skin irritant and sensitizer. Contact with formalin causes white discoloration, smarting, drying, cracking and scaling. Prolonged and repeated contact can cause numbness and hardening or tanning of the skin. Previously exposed persons may react to future exposure with an allergic eczema dermatitis or hives.

Inhalation: Formaldehyde is highly irritating to the upper respiratory tract and eyes. Concentrations of 0.5 to 2.0ppm may irritate the eyes, nose and throat of some individuals. Concentrations of 3 to 5ppm also cause tearing of the eyes and are intolerable to some persons. Concentration of 100ppm is immediately dangerous to life and health. Deaths from accidental exposure to high concentrations of formaldehyde have been reported.

Ingestion: Liquids containing 10 to 40 percent formaldehyde cause severe irritation and inflammation of the mouth, throat, and stomach. Severe stomach pains will follow ingestion with possible loss of consciousness and death. Ingestion of dilute formaldehyde solutions (0.03-0.04 percent) may cause discomfort in the stomach and pharynx.

Signs or Symptoms of Exposure: Irritation to eyes, nose, throat; headache; dizziness. See above for more information. Nausea. Note: The percent of formaldehyde by odor and eye irritation becomes less sensitive with time as one adapts to a formaldehyde. This can lead to overexposure if a worker is relying on formaldehyde's warning properties to alert him or her to the potential for exposure.

Effects from short term exposure (delayed, immediate, chronic): Irritation to the eyes, nose, throat; headache, dizziness, nausea. May cause cancer, mutagenic and reproductive effects. May affect organs after single or repeat exposure.

Acute Toxicity (Numerical Measures): Formaldehyde CAS 50-00-0: LD50 385 mg/kg (oral, mouse); LD50 100 mg/kg (oral, rat); LC50 200 mg/m³ (inh, rat); LC50 454 mg/m³/4H (inh, mouse)

Carcinogenicity (NTP, IARC, OSHA): Contains Formaldehyde IARC Group 1 Carcinogen associated with nasal sinus cancer, nasopharyngeal cancer, myeloid leukemia.

12. Ecological Information

Ecotoxicity: Formaldehyde is highly toxic to algae, protozoa and other unicellular organisms and slightly toxic to fish. In the atmosphere the material is rapidly degraded by photolysis and photooxidation. Formaldehyde is mobile in the soil. In water or soil, formaldehyde is biodegraded in a few days. Experiments performed on a variety of fish and shrimp show no bioconcentration of formaldehyde.

Persistence and degradability: N/A

Bioaccumulation Potential (octanol-water partition coefficient, BCF): N/A

Mobility in the soil: N/A

Adverse Environmental Effects: N/A

13. Disposal Considerations

Recommended Disposal Containers: Check with your local waste authorities.*

Recommended Disposal Methods: Do not dispose of in drains, check with your local waste authorities.*

Physical/Chemical Properties affecting Disposal: See section 2 and section 9 applicable information.*

Special Precautions for Landfill and Incineration Activities: Check with your local waste authorities.*

Waste Stream: Consult your local or regional authorities.*

14. Transport Information

UN Number: UN1170

UN Proper Shipping Name: Ethanol Solutions

Transport Hazard Class(es): 3

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Packing Group Number: III
Environmental Hazards (IMDG code):
Marine Pollutant: No
Transport in Bulk (IBC Code): N/A
Special Transport Precautions: N/A

15. Regulatory Information

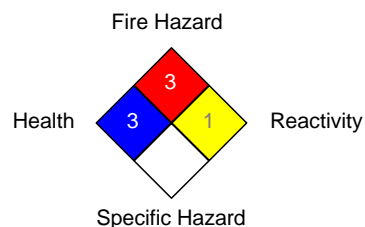
OSHA:
DOT:
EPA:
CPSC:

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16. Other Information
Revision Date: 07/16/2015

NFPA

Health	3
Fire Hazard	3
Reactivity	1
Specific Hazard	

National Fire Protection Association (USA) NFPA


HMIS

Health	3
Flammability	3
Physical Hazard	1
Personal Protection	

Hazardous Material Information System HMIS

Health	3
Flammability	3
Physical Hazard	1
Personal Protection	

Notice to Reader:

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