

**Modified EM Karnovsky****1. Identification****Product Name:** Modified EM Karnovsky**Item #:** 0234SNBL01**Web SDS:****Synonyms:** N/A**Recommended Use:** Laboratory Reagent**Restrictions on Use:** Any use other than recommended**Manufacturer:**BBC Biochemical
409 Eleanor Lane,
Mount Vernon, WA 98273
1-800-635-4477**In Case of Emergency:**Chemtec US 1-800-424-9300
Chemtec International 703-527-3887**2. Hazards Identification****OSHA Hazard Classification(s):**Skin Irritation - Category 2
Eye Irritation - Category 2A
Germ Cell Mutagenicity - Category 2
Sensitization - Skin - Category 1B
Toxic to Reproduction - Category 2
Specific Target Organ Toxicity (repeated exposure) - Category 2
Carcinogenicity - Category 2**Signal Word:** Warning**Hazard Statement(s):** Causes skin irritation. Causes serious eye irritation. Suspect of causing genetic defects. May cause an allergic skin reaction. Suspected of damaging fertility of the unborn child. May cause damage to organs (liver) through prolonged or repeated exposure. Suspected of causing cancer.**Pictogram(s):****Precautionary Statement(s):** Prevention: Wash body thoroughly after handling. Wear protective gloves. Wear eye protection, face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing, eye protection and face protection. Avoid breathing dust, vapors. Contaminated work clothing must not be allowed out of the workplace. Do not breathe dust, vapors. Response: If on skin: Wash with plenty of water. Specific treatment (see first aid section on this label). If skin irritation or rash occurs: Get medical attention. Take off all contaminated clothing and wash it before reuse. 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 attention. If exposed or concerned: Get medical attention. Call a doctor if you feel unwell. 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**3. Composition and Information on Ingredients**

Chemical Name	Common Name	CAS #	Concentration %
Glutaraldehyde		111-30-8	2.5
Select Buffers		Trade Secret	Trade Secret
Paraformaldehyde		30525-89-4	2
Water		7732-18-5	

4. First Aid Measures**Eye Contact:** 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:** 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.



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Inhalation: 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 of the eyes, nose, throat; headache, dizziness, respiratory irritation. Tearing and severe irritation of eyes.

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.

Fire Hazards (Chemical): Not flammable.

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.

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.

Storage: Store in a well-ventilated place. Keep cool.

8. Exposure Controls/Personal Protection

OSHA Permissible Exposure Limits (PELs):

Reagent	CAS #	OSHA PEL TWA
Formaldehyde (as off gas from paraformaldehyde)	50-00-0	0.75 ppm

ACGIH Threshold Limit Values (TLVs):

Reagent	CAS #	ACGIH PEL TLV	ACGIH STEL
Formaldehyde (as off gas from paraformaldehyde)	50-00-0	0.75 ppm	2 ppm
Glutaraldehyde	111-30-8	0.05ppm (0.2mg/m3)	

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, Colorless, Liquid

Molecular Weight: N/A

Molecular Formula: N/A

pH: 7.40

Boiling Point and Boiling Range: N/A

Melting Point/Freezing Point: N/A

Flash Point: N/A



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Specific Gravity/Relative Density: N/A
Odor: Pungent, Formaldehyde
Odor Threshold: N/A
Color: Colorless
Flammability (solid/gas): N/A
Vapor Density: N/A
Upper/Lower flammability or explosive limits: N/A
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: Not Reactive
Chemical Stability: Stable
Conditions of Stability/Instability: Stable under normal conditions of temperature and pressure
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
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: Irritation. May cause redness or discomfort.

Skin: Irritation. May cause redness, rash or chemical burns. May cause permanent scarring. Skin sensitizer, increased and frequent exposure may increase allergy-like symptoms on skin.

Inhalation: Dizziness, headache. May cause wheezing or asthma-like symptoms with repeated exposure.

Ingestion: Nausea. May cause discomfort to stomach and gastrointestinal lining.

Signs or Symptoms of Exposure: Nausea, wheezing, asthma like symptoms, rash or redness on skin, tearing of eyes, dizziness, headache. Repeat and long-term exposure may damage liver. Repeated and prolonged exposure may increase risk of germ cell mutagenicity and toxic effects on reproductive organs.

Effects from short term exposure (delayed, immediate, chronic): Irritation to the eyes, nose, throat; headache, dizziness, nausea.

Acute Toxicity (Numerical Measures): Paraformaldehyde: LD50(oral,rat)=800 mg/kg, LC50(inhalation,rat)=1070 mg/m³/4H
For 100% Gluteraldehyde RTEC MA2450000: LD50(oral,mouse)=100 mg/kg LD50(skin,rabbit)=560 uL/kg LC50 (inhalation,rat)=480 mg/m³/4H

Carcinogenicity (NTP, IARC, OSHA): Contains Paraformaldehyde, suspect of causing cancer.

12. Ecological Information

Ecotoxicity: N/A

Persistence and degradability: N/A



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

Mobility in the soil: N/A

Adverse Environmental Effects: May be toxic to environment.

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: Not Regulated

UN Proper Shipping Name:

Transport Hazard Class(es):

Packing Group Number:

Environmental Hazards (IMDG code):

Marine Pollutant:

Transport in Bulk (IBC Code):

Special Transport Precautions:

15. Regulatory Information

OSHA: N/A

DOT: N/A

EPA: N/A

CPSC: N/A



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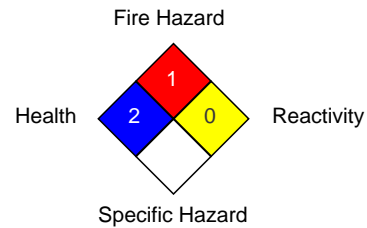
16. Other Information

Revision Date: 03/29/2018

NFPA

Health	2
Fire Hazard	1
Reactivity	0
Specific Hazard	

National Fire Protection Association (USA) NFPA



HMIS

Health	2
Flammability	1
Physical Hazard	0
Personal Protection	

Hazardous Material Information System HMIS

Health	2
Flammability	1
Physical Hazard	0
Personal Protection	

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