

Safety Data Sheet

M-2010

SECTION I - IDENTIFICATION

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Product Number FG-0574
Product Name M-2010
Chemical Family Biocides
CAS Number Multiple
Date Prepared 10/26/2015
Revision Number 10/26/2015
Recommended Use Biocide

SECTION II - HAZARDOUS IDENTIFICATION

GHS CLASSIFICATION:

Classification

Acute Toxicity, Oral	Category 5
Serious Eye Damage/Eye Irritation	Category 2B
Acute Toxicity, Inhalation	Category 4

WARNING!

GHS LABEL:



Hazard Statements

H303	May be harmful if swallowed
H320	Causes eye irritation
H332	Harmful if inhaled

Safety Data Sheet

M-2010

Precautionary Statements

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash... thoroughly after handling.
P271	Use only outdoors or in a well-ventilated are.
p304+340	IF INHALED: Remove victim to fresh air and keep comfortable for breathing.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so - continue rinsing.
P312	Call a POISON CENTER or a doctor/physician if you feel unwell.
P337+313	If eye irritation persists get medical advice/attention.

SECTION III - COMPOSITION/INFORMATION ON INGREDIENTS

The precise composition of this product is proprietary information. In the event of a medical emergency, a complete disclosure will be provided to medical personnel.

Component Name	CAS #	Component%	OSHA PEL	ACGIH TLV
Poly[oxyethylene(dimethyliminio)ethylene(dimethyliminio)ethylene dichloride]	31512-74-0	15%	None Listed	None Listed
Demineralized water	7732-18-5	Balance	Not Established	Not Established

SECTION IV - FIRST AID MEASURES

- Contact with eyes:** - Hold eye open and rinse slowly and gently with water for 15-20 minutes. - Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. - Call a poison control center or doctor for further treatment advice.
- Skin contact:** - Take off contaminated clothing. - Rinse skin immediately with plenty of water for 15-20 minutes. - Call a poison control center or doctor for treatment advice.
- Inhalation:** - Move person to fresh air. - If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. - Call a poison control center or doctor for further treatment advice.
- Ingestion:** - Call poison control center or doctor immediately for treatment advice. - Have person sip a glass of water, if able to swallow. - Do not induce vomiting unless told to do so by the poison control center or doctor. - Do not give anything by mouth to an unconscious person.

SECTION V - FIREFIGHTING MEASURES

Suitable Extinguishing Media: As appropriate for the surrounding fire.

Special Fire Fighting Procedures Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Safety Data Sheet

M-2010

Unusual Fire Fighting Hazards: In a fire or if heated, a pressure increase will occur and the container may burst. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds

SECTION VI - ACCIDENTAL RELEASE MEASURES

Personal Precautions: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

Environmental Precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods for Cleaning Up: Small Spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively; if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. Large Spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

SECTION VII - HANDLING AND STORAGE

Handling and Storage:

- Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Safety Data Sheet

M-2010

- Satisfactory Materials of Construction: Buna-N rubber Butyl rubber Polypropylene Plexiglas Teflon. PVC - rigid Viton EPDM rubber PVC - flexible Fiberglass Neoprene Polyethylene - low density Tygon Tyril 880 Gum rubber Silicone rubber Hypalon Polyethylene - high density Stainless steels 304 and 316 ABS (Plastic) Morton test liner (108 T 44LV) 6/6 Nylon FRP lined mild steel.

NOTE: With respect to all other materials not listed above, user should be aware that use of such materials with this product may be hazardous and result in damages to such materials and other property and personal injuries. No data concerning such materials not listed above should be implied by the user.

SECTION VIII - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

EXPOSURE LIMITS:

Component Name	CAS #	OSHA PEL	ACGIH TLV
Poly[oxyethylene(dimethyliminio)ethylene(dimethyliminio)ethylene dichloride]	31512-74-0	None Listed	None Listed
Demineralized water	7732-18-5	Not Established	Not Established

Engineering Controls: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Monitoring: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment (PPE)

Eye Protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin Protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. Personal protective equipment for the body should be selected based on the task

Safety Data Sheet

M-2010

being performed and the risks involved and should be approved by a specialist before handling this product. Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory Protection: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, pale yellow liquid
Odor	Mild.
pH@25°C	4.5-6.5
Melting/Freezing Point	<0°C (<32°F)
Flashpoint	Closed cup: >100°C (>212°F) [Tagliabue.]
Specific Gravity	1.03
Solubility	Easily soluble in the following materials: cold water and hot water.
Auto-Ignition Temperature	Not available.
Decomposition Temperature	Not available.
VOC Content	40 % (w/w)
Odor Threshold	Not available.
Boiling Range	>100°C (>212°F)
Evaporation Point	Not available.
Flammable Limits - Upper	Not available.
Flammable Limits - Lower	Not available.
Vapor Pressure	Not available.
Vapor Density (Air=1)	Not available.
Viscosity	Dynamic (room temperature): 125 mPa·s (125 cP)

SECTION X - STABILITY AND REACTIVITY

Stability: Stable

Conditions to Avoid: No specific data

Hazardous Decomposition/Byproducts: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous Polymerization: Will not occur.

Polymerization Conditions to Avoid: None

Safety Data Sheet

M-2010

Incompatibilities:

No specific data.

SECTION XI - TOXICOLOGICAL INFORMATION

Likely Route of Exposure: Routes of entry anticipated: Oral, Dermal, Inhalation

Inhalation: No specific data.

Eye Contact: This material can cause significant eye irritation.

Skin Contact: No specific data.

Ingestion: No specific data.

Acute Toxicity Value: Causes eye irritation. Harmful if inhaled. Skin contact: No known significant effects or critical hazards. Harmful if swallowed.

Chronic (Long Term) Effects: Not available.

Toxicity:

Component Name	LD50	LC50
Poly[oxyethylene(dimethyliminio)ethylene(dimethyliminio)ethylene dichloride]	LD50 Oral Rat 1850 mg/kg, LC50 Inhalation Dusts and mists Rat	Acute LC50 13 mg/l Marine water Crustaceans 96 hours,
Demineralized water	Not Established	Not Established

Reproductive Effects Not Applicable

Teratogenicity Not Applicable

Mutagenicity Not Applicable

Embryotoxicity Not Applicable

Sensitization to Product Not Applicable

Synergistic Products Not Applicable

Carcinogenicity Yes: 1,4-dioxane; Yes: bis(2-chloroethyl) ether

Safety Data Sheet

M-2010

SECTION XII - ECOLOGICAL INFORMATION

Ecotoxicity: Harmful to aquatic life.
Toxicity to fish LC50 (96 h 2400 mg/l, Oncorhynchus mykiss (static) The details of the toxic effect relate to the nominal concentration. The study was carried out in soft water. Literature data. Aquatic invertebrates EC50 (48 h 50 mg/l, Daphnia magna (DIN 38412 Part 11, static) The details of the toxic effect relate to the nominal concentration.

Mobility: Information not available.

Degradability: Information not available.

BioAccumulation: Information not available.

SECTION XIII - WASTE DISPOSAL CONSIDERATIONS

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION XIV - TRANSPORT INFORMATION

DOT SHIPPING INFORMATION

Proper Shipping Name: Not regulated.

Contains:

Hazard Class and Label:

Identification Number:

Packaging Group:

Other Shipping Info: SPECIAL PRECAUTIONS FOR USER: Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not established.

SECTION XV - REGULATORY INFORMATION

TSCA STATUS:..... The components of this product are listed on the TSCA Inventory

SARA TITLE III SECTION 302/304 EXTREMELY HAZARDOUS SUBSTANCE:

Safety Data Sheet

M-2010

No chemicals in this material are subject to the reporting requirements.

SARA TITLE III SECTION 311/312 HAZARD CATEGORIZATION:

Acute	Chronic	Fire	Pressure	Reactive
X	X			

SARA TITLE III SECTION 313 SUPPLIER INFORMATION:

Component Name	CAS #	% by wt.
Dichloroethyl ether	111-44-4	15%

CERCLA SECTION 102(a) HAZARDOUS SUBSTANCE:

Component Name	CAS #	% by wt.	RQ (lbs.)
1,4-dioxane; bis(2-chloroethyl) ether	123-91-1	15%	100

CALIFORNIA PROPOSITION 65:

This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. CAS 111-44-4; 123-91-1

SECTION XVI - OTHER INFORMATION

HMIS Health: 1

HMIS Flammability: 1

HMIS Reactivity: 0

Additional: U.S. Federal regulations: United States inventory (TSCA 8b): This product is subject to regulation under the US Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and is therefore exempt from US Toxic Substances Control Act (TSCA) Inventory listing requirements. Clean Water Act (CWA) 307: bis(2-chloroethyl) ether Clean Water Act (CWA) 311: bis(2-chloroethyl) ether

NSF: This product is listed by the NSF under NSF/ANSI Standard 60 for use in potable water applications with the following maximum allowable use rates : Concentrations of 2-5 ppm can be used at the initiation of treatment for up to 21 days. Thereafter, the maximum use rate is 0.5 ppm for potable water systems.

Safety Data Sheet

M-2010

FIFRA: This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of nonpesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

For Residential Use: CAUTION: Harmful if swallowed or absorbed through the skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish, aquatic organisms and clams. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA. For Occupation Use: CAUTION: Harmful if swallowed or absorbed through the skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Wear long-sleeved shirt, long pants, shoes, socks, and chemical resistant gloves made of any waterproof material (such as any waterproof material, such as Barrier Laminate, Butyl Rubber, Nitrile Rubber, Neoprene Rubber, Natural Rubber, Polyethylene, Polyvinyl Chloride (PVC) or Viton). USER SAFETY RECOMMENDATIONS: User should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. User should remove clothing/ PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. User should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing. USER SAFETY REQUIREMENTS: Follow manufacturer's instructions for cleaning/ maintaining PPE. If no such instructions for washables exists, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched (except as required by directions for use) or heavily contaminated with this product's concentrate. Do not reuse them. PERSONAL PROTECTIVE EQUIPMENT (PPE): Wear protective eyewear (goggles or face shield). Wear long sleeved shirt and long pants, socks, shoes, chemical-resistant apron and chemical resistant gloves (such as any waterproof material, such as Barrier Laminate, Butyl Rubber, Nitrile Rubber, Neoprene Rubber, Natural Rubber, Polyethylene, Polyvinyl Chloride (PVC) or Viton). ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish, aquatic organisms and clams. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

Safety Data Sheet

M-2010

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