Safety Data Sheet: MB-38

Supercedes Date 12/18/2009 **Issuing Date** 02/06/2013

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name MB-38
Recommended use Biocidal product
Information on Manufacturer
CHEM-AQUA, INC
BOX 152170
IRVING, TEXAS 75015

Product Code C517
Chemical nature Alkaline Aqueous solution
Emergency Telephone Number

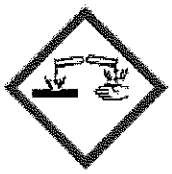
2. HAZARD IDENTIFICATION

Color Yellow - Green **Physical State** Liquid **Odor** Chlorine

GHS
Classification
Physical Hazards
Substances/mixtures corrosive to metal — Category 1

Health Hazard
Skin Corrosion/Irritation — Category 1
Serious Eye Damage/Eye Irritation — Category 1
Other hazards
None

Labeling
Signal Word
DANGER



Hazard Statements
H314 - Causes severe skin burns and eye damage
H290 - May be corrosive to metals

Precautionary Statements
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P260 - Do not breathe mist
P264 - Wash face, hands and any exposed skin thoroughly after handling.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P332 + P313 - If skin irritation occurs: Get medical advice/attention.
P363 - Wash contaminated clothing before reuse
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER or doctor/physician
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician
P301+ P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P312 - Call a physician if you feel unwell.
P406 - Store in corrosive resistant high density polyethylene (HDPE) container with a resistant inliner
P234 - Keep only in original container
P390 - Absorb spillage to prevent material damage
P501 - Dispose of contents/container to an approved waste disposal plant.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Sodium hypochlorite	7681-52-9	10-30
Sodium hydroxide	1310-73-2	1-5

4. FIRST AID MEASURES

General advice Do not get in eyes, on skin or on clothing. Do not breathe vapors or spray mist.

Eye Contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Call a physician or poison control center immediately.

Skin Contact Remove immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

Inhalation Move to fresh air. In case of shortness of breath, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.

Ingestion Call a physician or Poison Control Center immediately. Drink 1 or 2 glasses of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth.

Notes to physician The product causes burns of eyes, skin and mucous membranes. Control of circulatory system, shock therapy if needed.

5. FIRE-FIGHTING MEASURES

Flash Point Does not flash **Method** Not applicable

Flammability Limits in Air % Hydrogen, by reaction with metals. **Upper** 75 **Lower** 4

Suitable Extinguishing Media

Water spray. Foam. Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards arising from the chemical

Contact with metals may evolve flammable hydrogen gas. Material can create slippery conditions.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA **Health** 3 **Flammability** 0 **Instability** 1 **Other** OX

HMIS **Health** 3 **Flammability** 0 **Instability** 1

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.

Environmental Precautions Do not flush into surface water or sanitary sewer system.

Methods for Containment Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

Methods for Cleaning Up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust)

Neutralizing Agent Acetic acid, diluted.

7. HANDLING AND STORAGE

Handling Do not get in eyes, on skin or on clothing. Do not breathe vapors or spray mist.

Storage Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Metal containers must be lined.

Storage Temperature **Minimum** 35 °F / 2 °C **Maximum** 70 °F / 21 °C

Storage Conditions **Indoor** X **Outdoor** **Heated** **Refrigerated**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Sodium hypochlorite	No data available	No data available	No data available
Sodium hydroxide	Ceiling: 2 mg/m^3	TWA: 2 mg/m^3	IDLH: 10 mg/m^3 Ceiling: 2 mg/m^3

Engineering Measures Ensure adequate ventilation, especially in confined areas. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

Personal Protective Equipment

Eye/Face Protection Tightly fitting safety goggles. Face-shield.

Skin Protection Wear suitable protective clothing, Impervious gloves.

Respiratory Protection In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General Hygiene Considerations Wear protective gloves/clothing. Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re-use. Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	**Viscosity**	Non viscous
Color	Yellow - Green	**Odor**	Chlorine
Odor Threshold	Not applicable	**Appearance**	Transparent
pH	13.5	**Specific Gravity**	1.17
Evaporation Rate	< 1 (Butyl acetate=1)	**Percent Volatile (Volume)**	85
VOC Content (%)	0	**VOC Content (g/L)**	0
Vapor Pressure	12.5 mmHg @ 70°F	**Vapor Density**	< 1 (Air = 1.0)
Solubility	Soluble	**n-Octanol/Water Partition**	No data available
Melting Point/Range	No data available	**Decomposition Temperature**	No data available
Boiling Point/Range	284 °F / 140 °C	**Flammability (solid, gas)**	No data available
Flash Point	Does not flash	**Method**	Not applicable
Autoignition Temperature	No information available.		
Flammability Limits in Air %	Hydrogen, by reaction with metals.	**Upper** 75 **Lower** 4	

10. STABILITY AND REACTIVITY

Chemical Stability	Stable. Hazardous polymerization does not occur.
Conditions to Avoid	Keep away from open flames, hot surfaces, and sources of ignition
Incompatible Products	Reducing agents, Acids, Metals, Amines, Ammonia, Ammonium salts, Alcohols, Cyanides, Flammable materials, Combustible material.
Hazardous Decomposition Products	Hydrogen chloride gas, Sodium oxides, Phosgene, Contact with metals liberates hydrogen gas.
Possibility of Hazardous Reactions	None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information

The following values are calculated based on chapter 3.1 of the GHS document (Rev. 3, 2009):

Oral LD50	No information available
Dermal LD50	No information available
Inhalation LC50	
Gas	No information available
Mist	No information available
Vapor	No information available
Principle Route of Exposure	Skin contact, Eye contact, Inhalation.
Primary Routes of Entry	None known
Acute Effects	
Eyes	Corrosive to the eyes and may cause severe damage including blindness.
Skin	Causes skin burns.
Inhalation	Harmful by inhalation. Causes burns.
Ingestion	If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.
Chronic Toxicity	Inhaled corrosive substances can lead to a toxic edema of the lungs.
Target Organ Effects	Respiratory system
Aggravated Medical Conditions	Skin disorders, Respiratory disorders.

Component Information

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Sodium hypochlorite	= 8200 mg/kg (Rat)	> 10000 mg/kg (Rabbit)	no data available	no data available	no data available
Sodium hydroxide	no data available	= 1350 mg/kg (Rabbit)	no data available	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Sodium hypochlorite	no data available	no data available	no data available	no data available	no data available
Sodium hydroxide	no data available	no data available	no data available	no data available	eyes, respiratory system, skin

Carcinogenicity There are no known carcinogenic chemicals in this product.

Component	ACGIH	IARC	NTP	OSHA	Other
Sodium hypochlorite	not applicable	not applicable	not applicable	not applicable	not applicable
Sodium hydroxide	not applicable	not applicable	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information

Toxicity to fish
Pimephales promelas (fathead minnow) LC50 6.45 mg/L @48 hour

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Sodium hypochlorite	EC50 = 0.095 mg/L Skeletonema costatum 24 h	LC50 0.06 - 0.11 mg/L Pimephales promelas 96 h LC50 4.5 - 7.6 mg/L Pimephales promelas 96 h LC50 0.4 - 0.8 mg/L Lepomis macrochirus 96 h LC50 0.28 - 1 mg/L Lepomis macrochirus 96 h LC50 0.05 - 0.771 mg/L Oncorhynchus mykiss 96 h LC50 0.03 - 0.19 mg/L Oncorhynchus mykiss 96 h LC50 0.18 - 0.22 mg/L Oncorhynchus mykiss 96 h	no data available	EC50= 2.1 mg/L 96 h EC50 0.033 - 0.044 mg/L 48 h	N/A
Sodium hydroxide	no data available	LC50 = 45.4 mg/L Oncorhynchus mykiss 96 h	no data available	no data available	N/A

Persistence and Degradability No information available.
Bioaccumulation No information available.
Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency.

Container Disposal Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name	Hypochlorite solutions
Hazard Class	8
UN-No	UN1791
Packing Group	III
Reportable Quantity (RQ)	Sodium hypochlorite, RQ kg = 363.20
Description	UN1791, Hypochlorite solutions, 8, PG III , RQ

TDG

Hazard Class	8
UN-No	UN1791
Packing Group	III

ICAO

UN-No	UN1791
Proper Shipping Name	Hypochlorite solution
Hazard Class	8
Packing Group	III
Shipping Description	UN1791, Hypochlorite solution,8,PG III

IATA

UN-No	UN1791
Proper Shipping Name	Hypochlorite solution
Hazard Class	8
Packing Group	III
ERG Code	8L
Shipping Description	UN1791,Hypochlorite solution,8,PG III

IMDG/IMO

Proper Shipping Name	Hypochlorite solution
Hazard Class	8
UN-No	UN1791
Packing Group	III
EmS No.	F-A, S-B
Shipping Description	UN1791, Hypochlorite solution,8,PG III

15. REGULATORY INFORMATION

Inventories

TSCA	Complies
DSL	Complies

U.S. Federal Regulations

FIFRA

This chemical is a pesticide product registered by the US EPA and is subject to certain labeling requirements under federal pesticide laws. These requirements differ from the classification criteria and hazard information required for SDSs, and for workplace labels of non-pesticide chemicals.

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	No	No	No	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Sodium hypochlorite	100 lb	Not applicable
Sodium hydroxide	1000 lb	Not applicable

U.S. State Regulations

California Proposition 65	This product does not contain any Proposition 65 chemicals.

16. OTHER INFORMATION

Prepared By	Rachael Mohochi
Supercedes Date	12/18/2009
Issuing Date	02/06/2013
Reason for Revision	No information available.
Glossary	No information available.
List of References.	No information available.

CHEM-AQUA, INCassumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage or disposal of the product. The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.