

Issue Date 08-Aug-2011

Revision Date: 26-Jan-2014

Version 1.0

## 1. IDENTIFICATION

### Product Identifier

**Product Name** Maxim Liquid Metal Safe Dishmachine Detergent

### Other Means of Identification

**Product Code** 323000

### Recommended use of the Chemical and Restrictions on Use

**Recommended Use** Dishmachine Detergent Concentrate. For industrial use.

### Details of the Supplier of the Safety Data Sheet

Midlab, Inc.  
140 Private Brand Way  
Athens, TN 37303

### Emergency Telephone Number

**Company Phone Number** Phone: 1-423-337-3180  
**Emergency Telephone (24 hr)** INFOTRAC 1-352-323-3500 (International)  
1-800-535-5053 (North America)

## 2. HAZARDS IDENTIFICATION

**Appearance** Colorless

**Physical State** Liquid

**Odor** Characteristic

### Classification

Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1

### Signal Word

**Danger**

### Hazard Statements

Causes severe skin burns and eye damage.

### Precautionary Statements - Prevention

Do not breathe dust/fume/gas/mist/vapors/spray.  
Wash face, hands and any exposed skin thoroughly after handling.  
Wear protective gloves/protective clothing/eye protection/face protection.

### Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Immediately call a POISON CENTER or doctor/physician.  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
Wash contaminated clothing before reuse.  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
Immediately call a POISON CENTER or doctor/physician.  
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
Rinse mouth. Do not induce vomiting

### Precautionary Statements - Storage

Store locked up.



**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant.

**Hazards Not Otherwise Classified (HNOC)**

May be harmful if swallowed.

**Other Hazards**

Toxic to aquatic life with long lasting effects.

Toxic to aquatic life.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Water	7732-18-5	30-60
Potassium Hydroxide	1310-58-3	10-30
Tetrapotassium Pyrophosphate	7320-34-5	10-30
Sodium Silicate	1344-09-8	10-30
Sodium Hypochlorite	7681-52-9	1-5

\*\*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret\*\*

### 4. FIRST-AID MEASURES

**First Aid Measures**

<b>General Advice</b>	Immediately call a POISON CENTER or doctor/physician.
<b>Eye Contact</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. Contact lenses should be discarded.
<b>Skin Contact</b>	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
<b>Inhalation</b>	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a physician or poison control center immediately.
<b>Ingestion</b>	IF SWALLOWED: call a poison control center or physician immediately. Never give anything by mouth to an unconscious person. Rinse mouth. Drink plenty of water. Do not induce vomiting.

**Most Important Symptoms and Effects**

<b>Symptoms</b>	Causes severe skin burns and eye damage.
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**Indication of any Immediate Medical Attention and Special Treatment Needed**

<b>Notes to Physician</b>	May aggravate pre-existing skin disorders. Any lung condition may be aggravated.
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### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

Water spray (fog). Carbon dioxide (CO<sub>2</sub>). Dry chemical. Foam.

**Unsuitable Extinguishing Media**

Not determined.

**Specific Hazards Arising from the Chemical**

Product is not flammable.

**Hazardous Combustion Products**

Normal products of combustion.

**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.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment and Emergency Procedures**

<b>Personal Precautions</b>	Use personal protection recommended in Section 8.
<b>Environmental Precautions</b>	Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13, Disposal Considerations, for additional information.

**Methods and Material for Containment and Cleaning Up**

<b>Methods for Containment</b>	Prevent further leakage or spillage if safe to do so. For large spills, dike far ahead of liquid spill for later disposal.
<b>Methods for Clean-Up</b>	Contain and collect with an inert absorbent and place into an appropriate container for disposal. Dilute remaining residue with water and neutralize with dilute acetic acid (vinegar).

## 7. HANDLING AND STORAGE

**Precautions for Safe Handling**

<b>Advice on Safe Handling</b>	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes. Use personal protection recommended in Section 8. Wash face, hands, and any exposed skin thoroughly after handling. Do not breathe dust/fume/gas/mist/vapors/spray. For Industrial or professional use only.
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**Conditions for Safe Storage, including any Incompatibilities**

<b>Storage Conditions</b>	Keep container tightly closed and store in a cool, dry and well-ventilated place. Store locked up. Keep from freezing. Protect from excessive heat. Keep out of the reach of children.
<b>Incompatible Materials</b>	Acids. Oxidizing agents. Iron. Rust. copper. Cobalt. Nickel. Nitrogen compounds. Urea. Organic materials.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Potassium Hydroxide 1310-58-3	Ceiling: 2 mg/m <sup>3</sup>	(vacated) Ceiling: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m <sup>3</sup>

**Appropriate Engineering Controls**

<b>Engineering Controls</b>	Apply technical measures to comply with the occupational exposure limits. Eyewash stations. Showers.
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**Individual Protection Measures, such as Personal Protective equipment**

<b>Eye/Face Protection</b>	Wear goggles or chemical safety glasses. For Industrial or professional use only.
<b>Skin and Body Protection</b>	Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure.

**Respiratory Protection** No respiratory protection is necessary during normal use conditions. In the case of insufficient ventilation or if exposure limits are exceeded, use a suitable NIOSH/MSHA respiratory device.

**General Hygiene Considerations** Wash contaminated clothing before reuse. Wash face, hands and any exposed skin thoroughly after handling.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on Basic Physical and Chemical Properties

<b>Physical State</b>	Liquid	<b>Odor</b>	Characteristic
<b>Appearance</b>	Clear	<b>Odor Threshold</b>	Not determined
<b>Color</b>	Colorless		
<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>	
pH	13.5-14.0		
<b>Melting Point/Freezing Point</b>	~ 0 °C / 32 °F		
<b>Boiling Point/Boiling Range</b>	~ 100 °C / 212 °F		
<b>Flash Point</b>	None	Tag Closed Cup	
<b>Evaporation Rate</b>	Not determined		
<b>Flammability (Solid, Gas)</b>	Liquid-not applicable		
<b>Upper Flammability Limits</b>	Not determined		
<b>Lower Flammability Limit</b>	Not determined		
<b>Vapor Pressure</b>	Not determined		
<b>Vapor Density</b>	Not determined		
<b>Specific Gravity</b>	1.39		
<b>Water Solubility</b>	Completely soluble	@ 25 °C (77 °F)	
<b>Solubility in other solvents</b>	Not determined		
<b>Partition Coefficient</b>	Not determined		
<b>Autoignition Temperature</b>	Not determined		
<b>Decomposition Temperature</b>	Not determined		
<b>Kinematic Viscosity</b>	Not determined		
<b>Dynamic Viscosity</b>	Not determined		
<b>Explosive Properties</b>	None known		
<b>Oxidizing Properties</b>	Not determined		

## 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions.

### Chemical Stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Hazardous Polymerization

Hazardous polymerization does not occur.

### Conditions to Avoid

Elevated temperatures. Keep from freezing. Reacts with incompatible materials.

### Incompatible Materials

Acids. Oxidizing agents. Iron. Rust. copper. Cobalt. Nickel. Nitrogen compounds. Urea. Organic materials.

### Hazardous Decomposition Products

Oxygen when exposed to copper, nickel, cobalt, iron or iron compounds. Chlorine gas when exposed to acid.

## 11. TOXICOLOGICAL INFORMATION

### Information on Likely Routes of Exposure

**Product Information**

<b>Eye Contact</b>	Causes severe eye damage.
<b>Skin Contact</b>	Causes severe skin burns.
<b>Inhalation</b>	Avoid breathing vapors or mists.
<b>Ingestion</b>	May be harmful if swallowed. Do not taste or swallow.

**Component Information**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	> 90 mL/kg ( Rat )	-	-
Potassium Hydroxide 1310-58-3	= 214 mg/kg ( Rat )	-	-
Tetrapotassium Pyrophosphate 7320-34-5	-	> 4640 mg/kg ( Rabbit )	-
Sodium Silicate 1344-09-8	= 1153 mg/kg ( Rat )	> 4640 mg/kg ( Rabbit )	-
Sodium Hypochlorite 7681-52-9	= 8200 mg/kg ( Rat )	> 10000 mg/kg ( Rabbit )	-

**Information on Physical, Chemical and Toxicological Effects**

**Symptoms** Please see section 4 of this SDS for symptoms.

**Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure**

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen. However, the product as a whole has not been tested.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sodium Hypochlorite 7681-52-9		Group 3		

*IARC (International Agency for Research on Cancer)*

*Group 3 IARC components are "not classifiable as human carcinogens"*

**Chronic Toxicity** Chronic exposure may cause liver, kidney and/or blood disorders.

**Numerical Measures of Toxicity**

Not determined

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Toxic to aquatic life with long lasting effects.

**Component Information**

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Potassium Hydroxide 1310-58-3	-	80: 96 h Gambusia affinis mg/L LC50 static	-	-
Tetrapotassium Pyrophosphate 7320-34-5	-	100: 96 h Oncorhynchus mykiss mg/L LC50	-	100: 48 h water flea mg/L EC50
Sodium Silicate 1344-09-8	-	301 - 478: 96 h Lepomis macrochirus mg/L LC50 3185: 96 h Brachydanio rerio mg/L LC50 semi-static	-	216: 96 h Daphnia magna mg/L EC50

Sodium Hypochlorite 7681-52-9	0.095: 24 h Skeletonema costatum mg/L EC50	0.06 - 0.11: 96 h Pimephales promelas mg/L LC50 flow- through 4.5 - 7.6: 96 h Pimephales promelas mg/L LC50 static 0.4 - 0.8: 96 h Lepomis macrochirus mg/L LC50 static 0.28 - 1: 96 h Lepomis macrochirus mg/L LC50 flow-through 0.05 - 0.771: 96 h Oncorhynchus mykiss mg/L LC50 flow- through 0.03 - 0.19: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 0.18 - 0.22: 96 h Oncorhynchus mykiss mg/L LC50 static	-	2.1: 96 h Daphnia magna mg/L EC50 0.033 - 0.044: 48 h Daphnia magna mg/L EC50 Static
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**Persistence/Degradability**

Not determined

**Bioaccumulation**

Not determined

**Mobility**

Chemical Name	Partition Coefficient
Potassium Hydroxide 1310-58-3	0.83

**Other Adverse Effects**

Not determined

**13. DISPOSAL CONSIDERATIONS**

**Waste Treatment Methods**

**Disposal of Wastes** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated Packaging** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**California Hazardous Waste Status**

Chemical Name	California Hazardous Waste Status
Potassium Hydroxide 1310-58-3	Toxic Corrosive

**14. TRANSPORT INFORMATION**

**Note** Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

**DOT** UN3266, Corrosive Liquid, Basic, Inorganic, NOS (Containing Potassium Hydroxide), 8, PG II

**IATA**

**IMDG**

**15. REGULATORY INFORMATION**

**International Inventories**

**TSCA** Listed  
**Legend:**

*TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*  
*DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List*  
*EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*  
*ENCS - Japan Existing and New Chemical Substances*  
*IECSC - China Inventory of Existing Chemical Substances*  
*KECL - Korean Existing and Evaluated Chemical Substances*  
*PICCS - Philippines Inventory of Chemicals and Chemical Substances*

## US Federal Regulations

### CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Potassium Hydroxide 1310-58-3	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ
Sodium Hypochlorite 7681-52-9	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ

### SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Reactive Hazard	Yes

### 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 Title 40 of the Code of Federal Regulations, Part 372

### CWA (Clean Water Act)

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Potassium Hydroxide 1310-58-3	1000 lb			X
Sodium Hypochlorite 7681-52-9	100 lb			X

## US State Regulations

### California Proposition 65

This product does not contain any Proposition 65 chemicals.

### U.S. State Right-to-Know Regulations

Chemical Name	State List
Potassium Hydroxide 1310-58-3	MA, NJ, PA
Sodium Hypochlorite 7681-52-9	MA, NJ, PA

AZ – Arizona Ambient Air Quality Guidelines  
 CT – Connecticut Hazardous Air Pollutants  
 CA – California Director's List of Hazardous Substances  
 CAP65 – California Prop 65  
 FL – Florida Substances List  
 ID – Idaho Non-Carcinogen Toxic Air Pollutants

IL – Illinois Toxic Air Contaminant- Carcinogenic  
 MA – Massachusetts Right to Know List  
 MN – Minnesota Hazardous Substances List  
 NJ – New Jersey Right to Know List  
 PA – Pennsylvania Right to Know List  
 RI – Rhode Island Hazardous Substances List

**16. OTHER INFORMATION**

<b><u>NFPA</u></b>	<b>Health Hazards</b> Not determined	<b>Flammability</b> Not determined	<b>Instability</b> Not determined	<b>Special Hazards</b> Not determined
<b><u>HMIS</u></b>	<b>Health Hazards</b> 3	<b>Flammability</b> 0	<b>Physical Hazards</b> 1	<b>Personal Protection</b> Not determined

**Issue Date** 08-Aug-2011  
**Revision Date:** 26-Jan-2014  
**Revision Note** New format Version 1.0

**Disclaimer**

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

**Keep Out of Reach of Children. For Industrial and Institutional Use Only.**

\*Denotes changes from last version.

**End of Safety Data Sheet**