

1. Product and Company Identification

Product identifier	BOILERMATE 1101S
Other means of identification	Not available
Recommended use	Boiler Water Treatment
Recommended restrictions	None known.
Manufacturer	Miura America Co., Ltd. 2200 Steven B Smith Blvd Rockmart, GA 30153 U.S.A. Phone: 678-685-0929 Toll Free: 1-888-309-557 Fax: 678-685-0930 Emergency Phone: 1-800-424-9300 (CHEMTREC)

2. Hazards Identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements



Signal word	Danger
Hazard statement	May be corrosive to metals. Causes severe skin burns and eye damage.
Precautionary statement	
Prevention	Keep only in original container. Do not breathe mist or vapor. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
Response	Absorb spillage to prevent material damage. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If swallowed: Rinse mouth. Do NOT induce vomiting. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor. Specific treatment (see this label).
Storage	Store locked up. Store in corrosive resistant container with a resistant inner liner.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	10% of the mixture consists of component(s) of unknown acute oral toxicity. 100% of the mixture consists of component(s) of unknown acute inhalation toxicity.

3. Composition/Information on Ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	%
Sodium hydroxide		1310-73-2	5 - 15

Chemical name	Common name and synonyms	CAS number	%
Tetrasodium salt of ethylenediaminetetracetic acid tetrahydrate		13235-36-4	1 - 5

Composition comments US GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

4. First Aid Measures

Inhalation	If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor.
Skin contact	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center/doctor/. Specific treatment (see product label). Wash contaminated clothing before reuse.
Eye contact	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/doctor.
Ingestion	If swallowed: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center/doctor.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Indication of immediate medical attention and special treatment needed	Treat patient symptomatically.
General information	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Wear rubber gloves and chemical splash goggles. Keep out of reach of children.

5. Fire Fighting Measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Not available.
Specific hazards arising from the chemical	Firefighters should wear a self-contained breathing apparatus.
Special protective equipment and precautions for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
Hazardous combustion products	May include and are not limited to: Oxides of nitrogen. Oxides of potassium. Oxides of sodium. Oxides of carbon.
Explosion data	
Sensitivity to mechanical impact	Not available.
Sensitivity to static discharge	Not available.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not breathe mist or vapor. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Stop leak if you can do so without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Never return spills to original containers for re-use. Clean surface thoroughly to remove residual contamination. Following product recovery, flush area with water. Prevent entry into waterways, sewer, basements or confined areas. For waste disposal, see section 13 of the SDS.
Environmental precautions	Do not discharge into lakes, streams, ponds or public waters.

7. Handling and Storage

Precautions for safe handling	DANGER -- CORROSIVE Avoid contact with eyes, skin and clothing. Do not breathe mist or vapor. Wear appropriate personal protective equipment. Use only with adequate ventilation. Avoid prolonged exposure. Observe good industrial hygiene practices. Wash thoroughly after handling. When using do not eat or drink.
Conditions for safe storage, including any incompatibilities	Store in a closed container. Store in corrosive resistant container with a resistant inner liner. Store in a cool, dry place out of direct sunlight. Store away from incompatible materials (see Section 10 of the SDS). Store locked up.

8. Exposure Controls/Personal Protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	PEL	2 mg/m3

US. ACGIH Threshold Limit Values

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

Biological limit values	No biological exposure limits noted for the ingredient(s).
Exposure guidelines	Chemicals listed in section 3 that are not listed here do not have established limit values for ACGIH or OSHA PEL.
Appropriate engineering controls	Ensure adequate ventilation.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Chemical splash goggles.
Skin protection	
Hand protection	Impervious gloves. Confirm with reputable supplier first.
Other	As required by employer code.
Respiratory protection	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
Thermal hazards	Not applicable.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. When using do not eat or drink.

9. Physical and Chemical Properties

Appearance	Transparent
Physical state	Liquid.
Form	Liquid
Color	Colorless
Odor	Very little
Odor threshold	Not available.
pH	> 12 (1% water solution)
Melting point/freezing point	<= 23 °F (<= -5 °C)
Initial boiling point and boiling range	> 212 °F (> 100 °C)
Pour point	Not available.
Specific gravity	1.13

Partition coefficient (n-octanol/water)	Not available
Flash point	Not available.
Evaporation rate	Not available
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available
Vapor density	Not available
Relative density	Not available.
Solubility(ies)	Not available
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and Reactivity

Reactivity	Reacts violently with acids. This product may react with strong oxidizing agents.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Do not mix with other chemicals.
Incompatible materials	Oxidizing agents. Acids. Caustics. Reducing agents. Organic materials.
Hazardous decomposition products	May include and are not limited to: Oxides of nitrogen. Oxides of potassium. Oxides of sodium. Oxides of carbon.

11. Toxicological Information

Routes of exposure	Eye, Skin contact, Inhalation, Ingestion.
Information on likely routes of exposure	
Ingestion	Causes digestive tract burns.
Inhalation	Prolonged inhalation may be harmful. May cause irritation to the respiratory system.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Information on toxicological effects

Acute toxicity Causes severe skin burns and eye damage.

Components	Species	Test Results
Sodium hydroxide (CAS 1310-73-2)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	1350 mg/kg
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Not available	
Tetrasodium salt of ethylenediaminetetracetic acid tetrahydrate (CAS 13235-36-4)		
Acute		
<i>Dermal</i>		
LD50	Not available	

Components	Species	Test Results
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	945 mg/kg
Skin corrosion/irritation	Causes severe skin burns and eye damage.	
Exposure minutes	Not available.	
Erythema value	Not available.	
Oedema value	Not available.	
Serious eye damage/eye irritation	Causes serious eye damage.	
Corneal opacity value	Not available.	
Iris lesion value	Not available.	
Conjunctival reddening value	Not available.	
Conjunctival oedema value	Not available.	
Recover days	Not available.	
Respiratory or skin sensitization		
Respiratory sensitization	Not available.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	Not classified.	
Mutagenicity	Not classified.	
Carcinogenicity	Not classified.	
Reproductive toxicity	Not classified.	
Teratogenicity	Not classified.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not classified.	
Chronic effects	Prolonged inhalation may be harmful.	
Further information	Not available.	
Name of Toxicologically Synergistic Products	Not available.	

12. Ecological Information

Ecotoxicity	See below		
Components	Species		Test Results
Sodium hydroxide (CAS 1310-73-2)			
Aquatic			
Crustacea	EC50	Water flea (<i>Ceriodaphnia dubia</i>)	34.59 - 47.13 mg/l, 48 hours
Fish	LC50	Western mosquitofish (<i>Gambusia affinis</i>)	125 mg/l, 96 hours
Tetrasodium salt of ethylenediaminetetracetic acid tetrahydrate (CAS 13235-36-4)			
Aquatic			
Fish	LC50	Bluegill (<i>Lepomis macrochirus</i>)	472 - 500 mg/l, 96 hours
Persistence and degradability	No data is available on the degradability of this product.		
Bioaccumulative potential	No data available.		
Mobility in soil	No data available.		
Mobility in general	Not available.		
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.		

13. Disposal Considerations

Disposal instructions	Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.

Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

General Canada: TDG Proof of Classification: In accordance with Part 2.2.1 (SOR/2014-152) of the Transportation of Dangerous Goods Regulations, we certify that the classification of this product is correct as of the SDS date of issue. If applicable, the technical name and the classification of the product will appear below.

U.S. Department of Transportation (DOT)

Basic shipping requirements:

UN number	UN1760
Proper shipping name	Corrosive liquids, n.o.s. (Sodium hydroxide)
Hazard class	8
Packing group	III
Special provisions	IB3, T7, TP1, TP28
Packaging exceptions	154

Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

UN number	UN1760
Proper shipping name	CORROSIVE LIQUID, N.O.S. (Sodium hydroxide)
Hazard class	8
Packing group	III
Special provisions	16

DOT



TDG



15. Regulatory Information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

Canada WHMIS Ingredient Disclosure: Threshold limits

Sodium hydroxide (CAS 1310-73-2)	1 %
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WHMIS status Controlled

WHMIS classification Class E - Corrosive Material

WHMIS labeling



US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US CWA Section 311 Hazardous Substances: Listed substance

Sodium hydroxide (CAS 1310-73-2) Listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Sodium hydroxide (CAS 1310-73-2) Listed.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
 Immediate Hazard - Yes
 Delayed Hazard - No
 Fire Hazard - No
 Pressure Hazard - No
 Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)
 Not regulated.

Other federal regulations

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130) Hazardous substance

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - California Hazardous Substances (Director's): Listed substance

Sodium hydroxide (CAS 1310-73-2) Listed.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

US - Illinois Chemical Safety Act: Listed substance

Sodium hydroxide (CAS 1310-73-2) Listed.

US - Louisiana Spill Reporting: Listed substance

Sodium hydroxide (CAS 1310-73-2) Listed.

US - Minnesota Haz Subs: Listed substance

Sodium hydroxide (CAS 1310-73-2) Listed.

US - New Jersey RTK - Substances: Listed substance

Sodium hydroxide (CAS 1310-73-2) Listed.

US - New York Release Reporting: Hazardous Substances: Listed substance

Sodium hydroxide (CAS 1310-73-2) Listed.

US - Texas Effects Screening Levels: Listed substance

Sodium hydroxide (CAS 1310-73-2) Listed.

Tetrasodium salt of ethylenediaminetetracetic acid tetrahydrate (CAS 13235-36-4) Listed.

US. Massachusetts RTK - Substance List

Sodium hydroxide (CAS 1310-73-2) Listed.

US. Pennsylvania RTK - Hazardous Substances

Sodium hydroxide (CAS 1310-73-2) Listed.

US. Rhode Island RTK

Sodium hydroxide (CAS 1310-73-2) Listed.

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes

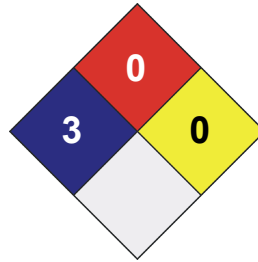
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	/ 3
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X



Disclaimer

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date

07-July-2015

Effective date

25-June-2015

Further information

For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

Prepared by

Dell Tech Laboratories, Ltd. Phone: (519) 858-5021

Other information

This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

This SDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.