

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Misco TMI12 Steam Boiler Treatment

Other means of identification

SDS # Misco TMI12

UN/ID No UN1814

Recommended use of the chemical and restrictions on use

Recommended Use Boiler treatment for steam boilers up to 150 PSI.
Uses Advised Against For industrial and institutional use only.

Details of the supplier of the safety data sheet

Supplier Address

Misco Industrial, LLC
 109 Space Park N
 Goodlettsville, TN 37072

Emergency Telephone Number

Company Phone Number 1-615-334-1861 (to reorder)
Emergency Telephone (24 hr) CHEMTREC 1-800-262-8200 (North America)
 1-703-741-5500 (International)

2. HAZARDS IDENTIFICATION

Appearance Dark, brown liquid **Physical State** Liquid **Odor** Slight, vanilla-like odor

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: 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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Sodium hydroxide	1310-73-2	3-7

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

General Advice	Immediately call a poison center or doctor/physician.
Eye Contact	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.
Skin Contact	Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.
Ingestion	Rinse mouth. Do not induce vomiting.

Most important symptoms and effects

Symptoms	Causes severe skin burns and eye damage.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water. Foam. Carbon dioxide (CO₂).

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Contact with some metals; particularly magnesium, aluminum and zinc (galvanized) can rapidly generate hydrogen which is explosive.

Hazardous Combustion Products When strongly heated, as in a fire, this product may produce carbon dioxide, carbon monoxide and oxides of phosphorous.

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

Personal Precautions Use personal protective equipment as required.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Small spills: Eliminate all sources of ignition. Clean up with a non-flammable absorbent such as clay or vermiculite and place in a labeled, closed metal container for proper disposal. Large spills: Eliminate all sources of ignition. Dike spill and reclaim if possible. Flush with a large quantity of water and neutralize with diluted acid solution. Dispose of properly neutralized (pH 6-9) salt solution in accordance with local, state and federal regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing and eye/face protection. Remove contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store locked up. Keep container closed when not in use. Store in a cool, well-ventilated area. Keep away from direct sunlight. Store away from incompatible materials. Do not store in unlabeled or mislabeled containers.

Incompatible Materials Strong acids. Strong oxidizing agents. Will react with active metals (aluminum, zinc and magnesium) liberating hydrogen gas.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium hydroxide 1310-73-2	Ceiling: 2 mg/m ³	TWA: 2 mg/m ³ (vacated) Ceiling: 2 mg/m ³	IDLH: 10 mg/m ³ Ceiling: 2 mg/m ³

Appropriate engineering controls

Engineering Controls Provide adequate ventilation and local exhaust is generally adequate. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Chemical safety goggles are recommended.

Skin and Body Protection Chemical resistant gloves or Nitrile rubber gloves are recommended. Shirts with long sleeves, rubber boots for cleaning up spills.

Respiratory Protection None required if good ventilation is maintained. If TLV is exceeding, use a NIOSH/MSHA

approved respirator.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	Odor	Slight, vanilla-like odor
Appearance	Dark, brown liquid		
Color	Dark brown		
<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>	
pH	12.5-14		
Melting Point/Freezing Point	Not determined		
Boiling Point/Boiling Range	100 °C / 212 °F		
Flash Point	None		
Evaporation Rate	<1.00		(butyl acetate = 1)
Flammability (Solid, Gas)	Liquid-Not applicable		
Upper Flammability Limits	Not determined		
Lower Flammability Limit	Not determined		
Vapor Pressure	~17.5 mm Hg		
Vapor Density	Not determined		
Specific Gravity	1.06		(Water = 1)
Water Solubility	Completely soluble		
Solubility in other solvents	Not determined		
Partition Coefficient	Not determined		
Auto-ignition Temperature	Not determined		
Decomposition Temperature	Not determined		
Kinematic Viscosity	Not determined		
Dynamic Viscosity	Not determined		
Explosive Properties	Not determined		
Oxidizing Properties	Not determined		
VOC Content	None		

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to Avoid

Incompatible Materials.

Incompatible Materials

Strong acids. Strong oxidizing agents. Will react with active metals (aluminum, zinc and magnesium) liberating hydrogen gas.

Hazardous Decomposition Products

When heated strongly, as in a fire, this product may produce carbon dioxide, carbon monoxide, and oxides of phosphorus.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Causes severe eye damage.

Skin Contact Causes severe skin burns.

Inhalation Do not inhale.

Ingestion Do not ingest.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium hydroxide 1310-73-2	-	= 1350 mg/kg (Rabbit)	-
Proprietary	= 3120 mg/kg (Rat)	> 7940 mg/kg (Rabbit)	-
Proprietary	= 3 g/kg (Rat)	> 10 g/kg (Rabbit)	> 42 g/m ³ (Rat) 1 h

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 Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity

Not determined.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Not determined.

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Not determined.

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
Sodium hydroxide 1310-73-2	Toxic Corrosive

14. TRANSPORT INFORMATION

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

DOT
UN/ID No UN1814
Proper Shipping Name Sodium hydroxide, solution
Hazard Class 8
Packing Group II

IATA
UN/ID No UN1814
Proper Shipping Name Sodium hydroxide, solution
Hazard Class 8
Packing Group II

IMDG
UN/ID No UN1814
Proper Shipping Name Sodium hydroxide, solution
Hazard Class 8
Packing Group II

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Sodium hydroxide	Present	X		Present		Present	X	Present	X	X

Legend:

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*
- DSL/NDSL - 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*
- AICS - Australian Inventory of Chemical Substances*

US Federal Regulations

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Sodium hydroxide 1310-73-2	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

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)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hydroxide	1000 lb			X

US State Regulations

California Proposition 65

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

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Sodium hydroxide 1310-73-2	X	X	X
Proprietary		X	X

16. OTHER INFORMATION

<u>NFPA</u>	Health Hazards	Flammability	Instability	Special Hazards
	Not determined	Not determined	Not determined	Not determined
<u>HMIS</u>	Health Hazards	Flammability	Physical Hazards	Personal Protection
	2	0	0	0

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 Revision Note: New format

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 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.

End of Safety Data Sheet