Boiler Guard

MSDS# SCM-150

March 2012 9 pages

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:
Boiler Guard
Manufacturer:
Specialty Chemical Manufacturing
1633-B High Bridge Road, Quincy, FL 32351
EMERGENCY Phone No.: 1 800.255.3924 Chem-Tel (Chemical Emergencies)
Phone (For Information): 1+580.875.1716
DATE REVISED: 03/15/2012
PREPARED BY: A. Jernigan

2. HAZARDS IDENTIFICATION

Emergency Overview: Corrosive! May cause respiratory tract, eye and skin burns. Harmful if absorbed through skin or if swallowed.
Contains Materials Which Causes Damage To The Following Organs:
Lungs, respiratory tract, skin, eye, lens or cornea.
Causes severe irritation and burns.
May be harmful if swallowed. Avoid breathing mist or spray.
Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed when not in use.
Routes of entry: Inhalation. Ingestion.
Potential acute health effects
Eyes: Corrosive to eyes.
Skin: Corrosive to the skin.
Inhalation: Corrosive to the respiratory system.
Ingestion: Toxic if swallowed. May cause burns to mouth, throat and stomach.
Carcinogenic effects: No known significant effects or critical hazards.
Mutagenic effects: No known significant effects or critical hazards.
Teratogenicity/Reproductive toxicity: No known significant effects or critical hazards.
Medical conditions:
Repeated skin exposure can produce local skin destruction or dermatitis.
Repeated or prolonged exposure to the substance can produce lung damage.
Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to the substance can produce damage to target organs.
Signs and Symptoms of Exposure:
Inhalation: Symptoms may vary from mild to severe irritation, sneezing, sore throat or runny nose. Severe pneumonitis may occur.
Ingestion: Symptoms may include burns of mouth, throat, and stomach, bleeding, vomiting, diarrhea, fall in blood pressure.

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Skin Contact: Contact with skin can cause redness, irritation or severe burns and scarring with greater exposures.
Eye Contact: Contact with mist, spray or liquid causes redness, tearing, severe irritation or burning in eyes. Prolonged exposures can cause burns that may result in permanent impairment of vision, even blindness.
Chronic Exposure: Prolonged contact with dilute solutions or mists has a destructive effect upon tissue.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

INGREDIENT	CAS NO	EINECS NO.	%	Symbol	Risk Phrases
Water	7732-18-5		60-80		
Sodium hydroxide	1310-78-2	231-659-4	5-7	C, Xi	R35, R36/38
Sodium sulfite	7757-83-7	231-821-4	5-10	Xn	R22; R31; R36/37/38 R40
Morpholine	110-91-8	203-815-1	2-3	C	R10; R20/21/22; R34

Additional information: *For the wording of the listed Risk phrases refer to section 15.*

4. FIRST AID MEASURES

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
Ingestion: DO NOT INDUCE VOMITING! Give large quantities of water or milk if available. Never give anything by mouth to an unconscious person. All the nearest poison control center or the National Poison Control Hotline at 1-800-222-1222 for advice.
Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician, immediately. Wash clothing before reuse.
Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.
Note to Physician: *Perform endoscopy in all cases of suspected sodium hydroxide ingestion. In cases of severe esophageal corrosion, the use of therapeutic doses of steroids should be considered. General supportive measures with continual monitoring of gas exchange, acid-base balance, electrolytes, and fluid intake are also required.*

5. FIREFIGHTING MEASURES

Not considered to be a fire hazard.
Explosion: May cause fire and explosions when in contact with incompatible materials.
Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire.
Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

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6. ACCIDENTAL RELEASE MEASURES

Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment as specified in Section 8. Contain and recover liquid when possible. Do not flush caustic residues to the sewer. Residues from spills can be diluted with water, neutralized with dilute acid such as acetic acid, hydrochloric acid or sulfuric acid. Absorb neutralized caustic residue on clay, vermiculite or other inert substance and package in a suitable container for disposal. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of 10,000 pounds. The toll free number for the US Coast Guard National Response Center is (800) 424-8802. Remove contaminated clothing immediately. Remove unnecessary personnel from the area of the spill.

7. HANDLING AND STORAGE

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities. Store above 16C (60F) to prevent freezing. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product. Do not store with aluminum or magnesium. Do not mix with acids or organic materials. Keep this and all chemicals out of the reach of children. Wash thoroughly after handling.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA Permissible Exposure Limit (PEL): 2ppm (Sodium hydroxide)
ACGIH Threshold Limit Value (TLV): 2ppm (Sodium hydroxide)
Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.
Personal Respirators (NIOSH Approved): If the exposure limit is exceeded and engineering controls are not feasible, a half facepiece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.
Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
Eye Protection: Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities or a source of running water in the work area.
Work Hygienic Practices: Use proper industrial hygiene practices to minimize hazardous exposure. Wash hands after handling this material, and before eating or smoking.

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9. PHYSICAL/CHEMICAL PROPERTIES
Appearance: Clear amber liquid
Odor: slight musky odor
Odor threshold: n.a.
pH: >11-12
Melting point/freezing point: <0°C (32°F)
Initial boiling point and boiling range: >100°C (212°F)
Flash point: Not applicable
Evaporation rate (water =1): >1.
Flammability limits %: Not applicable
Vapor pressure: 2mm Hg@20°C n.a.
Vapor density (Air-1): >1
Relative density: 1.135
Solubility: 100% water soluble
Partition Coefficient: n-octanol/water: Not applicable
Auto-ignition temperature: Not applicable
Decomposition temperature: n.a.
Viscosity: n.a.
Explosive properties: Not applicable
Oxidizing properties: Not applicable
n.a. = not available

10. STABILITY AND REACTIVITY
Stability: Stable under ordinary conditions of use and storage.
Hazardous Decomposition Products: Reaction with non-ferrous metals releases flammable and explosive hydrogen gas.
Hazardous Polymerization: Will not occur.
Incompatibilities: Strong oxidizing agents, acids, organics, combustible materials.. Contact with metals such as aluminum, magnesium, tin, and zinc may cause formation of flammable hydrogen gas.
Conditions to Avoid: Heat, incompatibles.

11. TOXICOLOGICAL INFORMATION
Sodium hydroxide CAS# 1310-78-2:
Draize test, rabbit, eye: 400 ug Mild;
Draize test, rabbit, eye: 1% Severe;
Draize test, rabbit, eye: 50 ug/24H Severe;
Draize test, rabbit, eye: 1 mg/24H Severe;
Draize test, rabbit, skin: 500 mg/24H Severe;<BR.

Carcinogenicity:
Sodium Hydroxide CAS# 1310-73-2: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Epidemiology: No information available.
Teratogenicity: No information available.
Reproductive Effects: No information available.
Neurotoxicity: No information available.
Mutagenicity: No information available.

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Morpholine CAS#110-91-8:
Acute toxicity
Oral LD50: rat - 1,450 mg/kg
Inhalation LC50: rat - 8 h - 8000 ppm
Dermal LD50: rabbit - 500 mg/kg
Other information on acute toxicity: no data available
Skin corrosion/irritation: Skin - rabbit - Severe skin irritation - 24 h
Serious eye damage/eye irritation: Eyes - rabbit - Severe eye irritation
Respiratory or skin sensitization: no data available
Germ cell mutagenicity: Genotoxicity in vitro - mouse – lymphocyte morphological transformation. Genotoxicity in vitro - Hamster – ovary sister chromatid exchange
Carcinogenicity
Carcinogenicity - mouse - Oral
Tumorigenic:Neoplastic by RTECS criteria. Lungs, Thorax, or Respiration:Bronchiogenic carcinoma. Liver:Tumors.
This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.
IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Morpholine)
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity: no data available
Teratogenicity: no data available
Specific target organ toxicity - single exposure (Globally Harmonized System): no data available
Specific target organ toxicity - repeated exposure (Globally Harmonized System): no data available
Aspiration hazard: no data available
Potential health effects:
Inhalation: May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Ingestion: Harmful if swallowed.
Skin: Toxic if absorbed through skin. Causes skin burns.
Eyes: Causes eye burns.
Signs and Symptoms of Exposure: Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea
Synergistic effects: no data available
Additional Information
RTECS: QD6475000

Sodium Sulfite CAS# 7757-83-7
Oral LD50 (rat): 3,560 mg/kg
Inhalation LC50 (rat): 4 h - > 5,500 mg/m3
Dermal LD50: no data available

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Other information on acute toxicity: no data available
Skin corrosion/irritation (rabbit): No skin irritation
Serious eye damage/eye irritation (rabbit): Mild eye irritation
Respiratory or skin sensitization: Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.
Germ cell mutagenicity: no data available
Carcinogenicity: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.
IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Sodium sulphite)
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
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NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity: no data available
Teratogenicity: no data available
Specific target organ toxicity - single exposure (Globally Harmonized System): no data available
Specific target organ toxicity - repeated exposure (Globally Harmonized System): no data available
Aspiration hazard: no data available
Potential health effects
Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion: May be harmful if swallowed.
Skin: May be harmful if absorbed through skin. May cause skin irritation.
Eyes: May cause eye irritation.
Signs and Symptoms of Exposure: May cause irritation of the:, gastrointestinal tract, violent colic, diarrhea, disturbance of:, circulatory system, central nervous system depression, death. Persons with allergies and/or asthma may exhibit hypersensitivity to sulfites.,
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Synergistic effects: no data available
Additional Information
RTECS: WE2150000

12. ECOLOGICAL INFORMATION
Sodium hydroxide CAS#1310-58-3
Environmental Fate:
No information found.
Environmental Toxicity:
TLM96 – Gambusia Affinis (Mosquito-Fish) 80ppm
Lethal Dose (24 hr. exposure):
Trout – 50ppm
Bluegills – 56ppm
Lepomis Pallidus (minnows) – 28ppm

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Morpholine CAS# 110-91-8
Toxicity
Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout): 180 - 380 mg/l - 96 h
Toxicity aquatic invertebrates (EC50 Daphnia magna (Water flea): 100 mg/l - 24 h
Toxicity to algae (Growth inhibition LOEC) Desmodesmus subspicatus (green algae): 80 mg/l - 72 h
Toxicity to algae (EC50) Desmodesmus subspicatus (green algae): > 310 mg/l - 72 h
Persistence and degradability: Biodegradable
Bioaccumulative potential: no data available
Mobility in soil: no data available
PBT and vPvB assessment: no data available
Other adverse effects: no data available

Sodium Sulfite CAS# 7757-83-7
Toxicity to fish (LC50) Gambusia affinis (Mosquito fish) : 660 mg/l - 96 h
Persistence and degradability: no data available
Bioaccumulative potential: no data available
Mobility in soil: no data available
PBT and vPvB assessment: no data available
Other adverse effects: no data available

FATE AND TRANSPORT: This material is not persistent in aquatic systems, but its high pH when undiluted or unneutralized is acutely harmful to aquatic life. It does not contribute to BOD. This material does not bioaccumulate..
PERSISTENCE:
BIOCONCENTRATION: No data
OTHER ECOLOGICAL INFORMATION: This material has exhibited slight toxicity to terrestrial organisms.

13. DISPOSAL CONSIDERATIONS
Dispose of spill clean-up and other wastes in accordance with Federal, State, and local regulations. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Treat empty containers as hazardous. Dispose of container and unused contents in accordance with federal, state and local requirements. State and local disposal regulations may differ from federal disposal regulations
RCRA Hazard Class (if discarded): CORROSIVE D002.

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14. TRANSPORT INFORMATION
UN Number: UN3266
UN Proper Shipping Name: Corrosive liquid, Basic, Inorganic, N.O.S. (Contains sodium hydroxide)
Transport Hazard Class(es): 8
Packing group: III
Environmental Hazards: Not Environmentally Hazardous Substance; not a Marine Pollutant
ADR/RID ROAD//CDG Transport Information: Transport category 3; Tunnel restriction code E
SEA (IMDG) AIR (ICAO/IATA): ERG Code 8L
ADR/RID Class: 8
ADR/RID Packing Group: III
IMDG Hazard Class: 8
IMDG Packing Group: III
IMDG Code Segregation Group: n.a.
EmS: F-A S-B
ADNR Corrosive liquid, Basic, Inorganic, N.O.S. (Contains sodium hydroxide)
IATA Hazard Class: 8
IATA Packing Group III
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

15. REGULATORY INFORMATION
Risk phrases:
R10: Flammable
R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.
R35: Causes severe burns.
R36/37/38: Irritating to eyes, respiratory system and skin.
R40: Limited evidence of carcinogenic effect.
Safety phrases
S1/2: Keep locked up. Keep out of reach of children
S24/25: Avoid contact with skin and eyes
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
Federal, State & International Regulations
U.S. REGULATIONS:
U.S. INVENTORY (TSCA): All components are listed on or are exempt from the inventory.
TSCA 12(b) EXPORT NOTIFICATION: Not listed.
CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES: 1000 LBS RQ (sodium hydroxide);
SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES: Not regulated.
SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES):
ACUTE: Yes; **CHRONIC**: No; **FIRE**: No; **REACTIVE**: No; **SUDDEN RELEASE of Pressure**: No
SARA TITLE III SECTION 313: Not regulated.
OSHA PROCESS SAFETY: Not regulated.
STATE REGULATIONS:
California Proposition 65: Not regulated.
NEW JERSEY WORKER AND COMMUNITY RIGHT TO KNOW:
Reporting Requirement: Sodium hydroxide (CAS# 1310-73-2:) 5-10%

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Right To Know Hazardous Substance List: Sodium hydroxide (CAS# 1310-73-2:) 5-10% **Special Health Hazard Substance List:** Sodium hydroxide (CAS# 1310-73-2:) 5-10% **PENNSYLVANIA RIGHT TO KNOW:**
Reporting Requirement: Sodium hydroxide (CAS# 1310-73-2:) 5-10%
Hazardous Substance List: Sodium hydroxide (CAS# 1310-73-2:) 5-10%
ENVIRONMENTAL HAZARDOUS SUBSTANCE LIST: Potassium hydroxide (1310-58-3) 5-10%
SPECIAL HAZARDOUS SUBSTANCE LIST: Not regulated.
CANADIAN REGULATIONS:
WHMIS CLASSIFICATION: E.
CANADA INVENTORY (DSL/NDSL): All components of this product are listed on the DSL.
Australian Hazchem Code: 2R
Poison Schedule: Not scheduled
WHMIS: This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. OTHER INFORMATION
NFPA/HMIS Ratings: Health: **3** Flammability: **0** Reactivity: **1**
Label Hazard Warning:
Danger: Contains sodium hydroxide.
Corrosive to eyes, skin and respiratory organs.
Label Precautions:
Wear eye and skin protection when mixing and using this product.
Do not get in eyes, on skin or clothing
Wash thoroughly with soap and water after handling.
Consult the Safety Data Sheet for this product for additional storage handling and use and disposal information.
Label First Aid
For eye contact, flush eyes with water for 15 minutes. If irritation occurs, contact physician immediately.
For Skin contact, wash with soap and water until the area no longer feels “slick”. If irritation persists, get medical attention.
Do not take internally. In case of accidental ingestion, do not induce vomiting; give 2-3 glasses of water and call the nearest poison control center.
If inhaled, remove the victim to fresh air. If breathing has not returned to normal within 15 minutes, get medical attention.

This information is, to the best of our knowledge and belief, accurate and reliable as of the date completed. However no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user’s responsibility to satisfy himself as to the completeness and suitability of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information, nor do we offer any warranty against patent infringement.