SAFETY DATA SHEET

Boiler Scale Destroyer Liquid

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION:

MANUFACTURED FOR: Essential Chemical
4800 Meadows Rd. Ste. 300
Lake Oswego, OR 97035
INFORMATION PHONE: (503) 714-9781
EMERGENCY PHONE: **CHEMTREC:** (800) 424-9300

PRODUCT NAME: Boiler Scale Destroyer Liquid
PRODUCT NUMBER: EC-257
DATE PREPARED: 04/14/2025
LAST REVISION: 04/14/2025

Uses: for removing oils, mill scale, grease, precipitates, preservative coatings, and other deposits from contaminated boilers, heat exchangers, closed loops, and other water heating, cooling and process systems.
Use Restrictions: n/a

PURE: ☐ LIQUID: ☒
MIXTURE: ☒ SOLID: ☐

2. HAZARDOUS IDENTIFICATION:

EMERGENCY OVERVIEW: Corrosive

GHS CLASSIFICATION: Corrosive to Metals (Category 1) Skin Corrosion: (Category 1) Serious Eye Damage: (Category 1)
Acute Toxicity Oral: (Category 4)

GHS Label elements, including precautionary statements
SIGNAL WORD: **Danger** **PICTOGRAM:**



HAZARD STATEMENT(S):
H290: May be Corrosive to metals
H302: Harmful if swallowed
H314: Causes severe skin burns and eye damage
H332: Harmful if inhaled

PRECAUTIONARY STATEMENT(S):
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.
P304+P340: IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313 IF SKIN: irritation or rash occurs: Get medical advice/attention.
P337+P313**:** IF eye irritation persists: Get medical advice/attention.

POTENTIAL HEALTH EFFECTS

EYE CONTACT: Vapors, liquid and mists are extremely corrosive to the eyes. Brief contact of the liquid or mists will severely damage the eyes and prolonged contact may cause permanent eye injury which may be followed by blindness.
INHALATION: Vapors, liquid and mists are extremely corrosive to the nose and throat. Irritation, coughing, chest pain, and difficulty in breathing may occur with brief exposure, while prolonged exposure may result in more severe irritation and tissue damage.
INGESTION: Vapors, liquid and mists are extremely corrosive to the mouth and throat. Swallowing the liquid burns the tissues, causes severe abdominal pain, nausea, vomiting and collapse. Swallowing large quantities can cause death.
SKIN CONTACT: Vapors, liquid and mists are extremely corrosive to the skin. Vapors severely irritate the skin, and liquid and mists will severely burn the skin. Prolonged skin contact will burn or destroy surrounding tissue and death may accompany burns which extend over large portions of the body. A latent period may exist between exposure and sense of irritation.
SIGNS AND SYMPTOMS OF EXPOSURE: Irritation, pain, coughing, redness of skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS:

Chemical Name	CAS #	Range wt %
POTASSIUM HYDROXIDE	1310583	30 - 40
Balance of formula contains water and non-regulated proprietary ingredients	- -	- -

4. FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with water for at least 15 minutes. Hold eyelids open while flushing the eyes. Get medical attention.
INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
INGESTION: If swallowed, do NOT induce vomiting. Give victim lots of water or milk. Get medical attention immediately. Never give anything by mouth to an unconscious or convulsing person.
SKIN CONTACT: Wash with soap and water. Change contaminated clothing. Get medical attention if irritation develops or persists.
AGGRAVATED MEDICAL CONDITIONS: Pre-existing eye, skin or respiratory conditions.
SUPPLEMENTAL HEALTH INFORMATION: The effects of long-term, low-level exposure to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the avoidance of all effects from repetitive acute exposures.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Use extinguishing media appropriate for surrounding fire.
SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full facepiece in positive pressure mode. Move containers from fire area if it can be done without risk. Use water to keep fire-exposed containers cool.
UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.
COMBUSTION PRODUCTS: Potassium oxide, Oxides of Carbon, phosphines

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED OR RELEASED: Small spills: Mop up, wipe up or soak up immediately. Remove to out of doors. Large spills: Evacuate area. Contain liquid; transfer to closed poly containers. Keep out of water supply. Follow all SDS/label precautions even after container is emptied because it may retain product residues.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Protect from freezing. Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet. Follow all SDS/label precautions even after container is emptied because it may retain product residues.

OTHER PRECAUTIONS: For industrial and institutional use only. Keep away from children. Keep containers closed while not in use.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure Guidelines:

Chemical Name	OSHA PEL	ACGIH TLV
POTASSIUM HYDROXIDE	2mg/M3	2 mg/M3

Contains no additional substances with occupational exposure limit values.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: Wear a NIOSH/MSHA approved respirator appropriate for vapor concentration at point of use.

VENTILATION: Local exhaust sufficient to keep exposure below TLV.

WORK/HYGENIC PRACTICES: Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet.

EYE PROTECTION: Use chemical safety goggles and/or full face shield when splashing is possible. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work areas.

PROTECTIVE GLOVES: Rubber or other impervious material with gauntlets.

OTHER PROTECTIVE EQUIP: Boots, apron, lab coat or coveralls of impervious material, safety shower, eyewash.

ENGINEERING CONTROLS: Facilities storing or utilizing this material should be equipped with an eye wash facility and safety shower.

9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

a) Appearance: Clear, colorless liquid	**k) Vapor pressure (mm/hg):** No data available
b) Odor: No appreciable odor.	**l) Vapor density (Air = 1):** No data available
d) pH: >13	**m) Relative density (Specific Gravity):** 1.21
e) Melting point/freezing point: No data available	**n) Water solubility:** Complete
f) Initial boiling point and boiling range: 230ºF	**p) Auto-ignition temperature:** n/a
g) Flash point: n/a **Method Used:** n/a	**r) Viscosity:** No data available
h) Evaporation rate: No data available	**-) Pounds Per Gallon:** 10.1
j) Upper/lower flammability or explosive limits: UEL: n/a **LEL:** n/a	**OTHER:** No other data is available for this product. . . . .

10. STABILITY AND REACTIVITY

STABLE: Stable under recommended storage conditions.

INCOMPATIBILITY: Acids and metals such as zinc, aluminum and tin

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Oxides of carbon

HAZARDOUS POLYMERIZATION: Will Not Occur

CONDITIONS TO AVOID: Contact with incompatible materials.

11. TOXICOLOGICAL INFORMATION:

None of the components of this product are listed as carcinogens. No other data available.

12. ECOLOGICAL INFORMATION:

Keep out of waterways

13. DISPOSAL CONSIDERATIONS:

Dilute with large amounts of water and dispose to municipal or industrial waste treatment facility in accordance with applicable regulations.

14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class	Packing Group
US DOT	3266	Corrosive Liquids, Basic, Inorganic, n.o.s. (Potassium hydroxide)	8	II

ERG No.: 154

15. REGULATORY INFORMATION:

This product acceptable with 21 Food and Drug CFR 173.310 Boiler Water Additive

16. OTHER INFORMATION

HMIS INFORMATION: HEALTH: 3 FLAMMABILITY: 0 PHYSICAL HAZARD: 1 PROTECTIVE: H

NFPA INFORMATION: TOXICITY: 3 FIRE: 0 REACTIVITY: 1 SPECIAL: C

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