

SECTION 1 – PRODUCT AND COMPANY INFORMATION

Product Identifiers

Product name: 157-L BOILER COMPOUND

Product Application: Boiler Water Treatment

Emergency telephone number: CHEMTREC (800) 424-9300 Poison Control: 1-800-222-1222

SECTION 2 – HAZARD IDENTIFICATION

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Signal Word: **WARNING**

Pictograms: Corrosive

Physical Hazards: Corrosive to Metals

Health Hazards: Skin Irritation/Corrosion (Category 1) Causes severe skin burns.
Eye Damage/Irritation (Category 1) Causes serious eye damage.

Environmental Hazards: Acute aquatic toxicity (Category 3) Harmful to aquatic life.



Precautionary Statements

Prevention: Wash thoroughly after handling. Wear protective gloves or clothing. Wear eye or face protection. Avoid release to the environment.

Response: **If on skin:** Wash with plenty of water. See First Aid on this label for specific treatment. If skin irritation occurs: Get medical advice or attention. Take off contaminated clothing and wash it before reuse.
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. Wash contaminated clothing before reuse.

Collect Spillage

Storage: None

Disposal: None

HNOC: HMIS Rating: Health hazard:3 Flammability: 0 Physical Hazard 0
NFPA Rating: Health hazard: 3 Fire Hazard: 0 Reactivity Hazard: 0
* Hazards not otherwise classified (HNOC) or not covered by GHS.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredient	CAS	Wt%
Sodium Hydroxide (Caustic Soda)	1310-736-2	1-3%
Sodium Carbonate (Soda Ash)	497-19-8	1-3%
DiEthylAminoEthanol (DEAE)	100-37-8	1-3%
1-Hydroxyethylidene-1,1-diphosphonic acid	2809-21-4	<1%

SECTION 4 – FIRST AID MEASURES

Description of first aid measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Indication of any immediate medical attention and special treatment needed: None known.

SECTION 5 – FIREFIGHTING MEASURES

Flammable Properties: Non-Flammable

Explosive Properties: N/A

Suitable Extinguishing media: N/A

Unsuitable extinguishing media: N/A

Special hazards arising from the substance or mixture: Overheating in fire conditions may produce POISONOUS GASES. Sodium Hydroxide in contact with water or moisture may generate enough heat to ignite combustibles.

Advice for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Further information: If employees are expected to fight fires, they must be trained and equipped as stated in the OSHA Fire Brigades Standard (29 CFR 1910.156).

SECTION 6 – ACCIDENTIAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Wear respiratory protection. Avoid dust formation. Avoid breathing vapor, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see Section 8.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up: Keep in suitable, closed containers for disposal. Reference to other sections: For disposal see Section 13.

Product is water soluble and may be diluted and flushed as below described.

Other Information: This product is intended to be used in pretreatment of boiler water, and discharged to sanitary sewer in boiler blowdown water. Concentrated product may be diluted to a similar working concentration and flushed to sewer, or the concentrate soaked up with absorbent material and landfilled in accordance with local, state, and federal regulations.

SECTION 7 – HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with skin and eyes. Avoid formation of aerosols. Provide appropriate exhaust ventilation. For precautions see Section 2.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a dry and well-ventilated place. Store as a non-combustible, corrosive hazardous materials

SECTION 8 – EXPOSURE CONTROL AND PERSONAL PROTECTION

Control parameters

Components with workplace control parameters:

Component	CAS #	Value	Control Parameters	Basis
Sodium Carbonate, Anhydrous	497-19-8	Not Regulated		
Component: 2-(Diethylamino)ethanol	100-37-8	TWA	2 ppm	USA. ACGIH Threshold Limit Values(TLV)
		TWA	10 ppm	USA. NIOSH Recommended
		TWA	50 mg/m ³	Exposure Limits
		Dermal Absorption		
		TWA	10 ppm	USA. Occupational Exposure Limits
		TWA	50 mg/m ³	(OSHA) - Table Z-1 Limits for Air Contaminants
Sodium Hydroxide	1310-73-2	USA ACGIH	2 mg/m ³	ACGIH Ceiling (mg/m ³)
		USA OSHA	2 mg/m ³	OSHA PEL (TWA) (mg/m ³)
1-Hydroxyethylidene 1,1-	2809-21-4	Not Regulated		

Exposure controls

Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear colorless liquid with mild organic odor

pH:	13.0
Specific Gravity:	1.095
Molecular Weight:	Mixture
Water Solubility:	Complete
Melt/Freeze Point:	Not Determined
Boiling Point:	110 C / 230 F
Flammability:	Not Flammable
Flash Point:	N/A
Vapor Density:	NA

Note: Physical Data is typical values based on material tested, but may vary based on composition. Values should not be accepted as guaranteed for every lot or as specifications for this product.

SECTION 10 – STABILITY AND REACTIVITY

Reactivity:	No data available
Chemical stability:	Stable under normal conditions of use and storage
Possibility of hazardous reactions:	No data available
Conditions to avoid:	None known
Incompatible materials:	Strong acids and oxidizers.
Hazardous decomposition products:	None known.

SECTION 11 – TOXICOLOGICAL INFORMATION

Component: 1-Hydroxy Ethylidene 1,1 CAS 2809-21-4	
Acute Oral Toxicity	LD50, Mouse, 1800. MG/KG.
Acute inhalation toxicity	No data available
Acute Dermal Toxicity	LD50 Dermal - Rat - 7000 mg/kg
Eye irritation	Strong irritant with the danger to cause serious eye injury, caused serious eye irritation
Target Organ Systemic Toxicant -Single exposure	Ingestion or inhalation will result in serious damage to affected membranes
Target Organ Systemic Toxicant - Repeated exposure	Routes of exposure: Inhalation May cause damage to organs through prolonged or repeated exposure.
Skin corrosion/irritation:	Can cause irritation to the skin.
Ingestion:	May be harmful if swallowed. Can cause slight irritation and discomfort.
Respiratory or skin sensitization:	No data available
Reproductive toxicity:	No data available
Carcinogenicity	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.
Aspiration hazard:	May be harmful if inhaled. Can cause irritation to the respiratory tract and can induce coughing.
Germ cell mutagenicity:	No data available

Component: Sodium Hydroxide CAS 1310-73-2	
Acute Oral Toxicity	LDLo - Lowest published lethal dose oral rabbit 500 mg /kg
Acute inhalation toxicity	No data available
Acute Dermal Toxicity	1350 mg/kg (Rabbit; Literature,Rabbit; Literature)
Eye irritation	Causes serious eye damage.
Target Organ Systemic Toxicant -Single exposure	Injection or inhalation will result in serious damage to affected membranes
Target Organ Systemic Toxicant - Repeated exposure	Based on available data, the classification criteria are not met
Skin corrosion/irritation:	Causes severe skin burns and eye damage.
Respiratory or skin sensitization:	No data available
Reproductive toxicity:	Based on available data, the classification criteria are not met
Carcinogenicity	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.
Aspiration hazard:	No data available
Germ cell mutagenicity:	Based on available data, the classification criteria are not met

Component: 2-(Diethylamino)ethanol CAS 100-37-8	
Acute Oral Toxicity	LD50 Oral - rat - 1,300 mg/kg
Acute inhalation toxicity	LC50 Inhalation - mouse - 5,000 mg/m3
Acute Dermal Toxicity	LD50 Dermal - rabbit - 1,113 mg/kg
Eye irritation	Severe eye irritation
Target Organ Systemic Toxicant -Single exposure	No data available
Target Organ Systemic Toxicant - Repeated exposure	No data available
Skin corrosion/irritation:	No data available
Respiratory or skin sensitization:	No data available
Reproductive toxicity:	No data available
Carcinogenicity	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.
Aspiration hazard:	No data available
Germ cell mutagenicity:	No data available

Component: Sodium Carbonate, Anhydrous CAS 497-19-8	
Acute Oral Toxicity	LD50 2,800 mg/kg (rat)
Acute inhalation toxicity	LC50 2.3 mg/L (rat)
Acute Dermal Toxicity	LD50 > 2,000 mg/kg (rabbit)
Eye irritation	Irritating to eyes.
Target Organ Systemic Toxicant -Single exposure	No data available
Target Organ Systemic Toxicant - Repeated exposure	No data available
Skin corrosion/irritation:	No data available

Respiratory or skin sensitization:	Patch test on human volunteers did not demonstrate sensitization properties
Reproductive toxicity:	No data available
Carcinogenicity	Not recognized as carcinogenic by Research Agencies (IARC, NTP, OSHA, ACGIH).
Aspiration hazard:	No data available
Germ cell mutagenicity:	No data available

SECTION 12 – ECOLOGICAL INFORMATION

Component: 1-Hydroxy Ethylidene 1,1 CAS 2809-21-4	
Toxicity, Fish	Rainbow Trout (<i>Oncorhynchus mykiss</i>), 368.0 MG/L, 96 H.
Toxicity, invertebrates	Water Flea (<i>Daphnia magna</i>), 527.0 MG/L, 48 H.
Toxicity, Algae	
Bioaccumulation	This material is not expected to bio-accumulate.
Mobility	Accidental spillage may lead to penetration in the soil and groundwater. However, there is no evidence that this would cause adverse ecological effects.
Biodegradability	Degrades after acclimatization.
Biochemical OxygenDemand (BOD)	No data available
Other adverse effects:	No data available

Component: Sodium Hydroxide CAS 1310-73-2	
Toxicity, Fish	LC50 45.4 mg/l 96 h; <i>Salmo gairdneri</i> (<i>Oncorhynchus mykiss</i>)
Toxicity, invertebrates	LD50 100 mg/l (48 h; <i>Daphnia magna</i> ; PURE SUBSTANCE)
Toxicity, Algae	No data available
Bioaccumulation	This material will not bioconcentrate
Mobility	No data available
Biodegradability	This Material will disassociate into ionic form in the aquatic environment . Natural carbon dioxide will slowly neutralize this material
Biochemical OxygenDemand (BOD)	No data available
Other adverse effects:	No data available

Component: 2-(Diethylamino)ethanol CAS 100-37-8	
Toxicity, Fish	LC50 - <i>Leuciscus idus</i> (Golden orfe) - 100 - 220 mg/l - 96 h
Toxicity, invertebrates	EC50 - <i>Daphnia magna</i> (Water flea) - 83.6 mg/l - 48 h
Toxicity, Algae	EC50 - Algae - 30 mg/l - 72 h
Bioaccumulation	No data available
Mobility	No data available
Biodegradability	Biotic/Aerobic - Exposure time 14 d
Biochemical OxygenDemand (BOD)	No data available
Other adverse effects:	No data available

Component: Sodium Carbonate, Anhydrous CAS 497-19-8	
Toxicity, Fish	LC50 Bluegill 300 mg/l 96H
Toxicity, invertebrates	EC50 Ceriodaphnia 200-277 mg/l 48H
Toxicity, Algae	No data available
Bioaccumulation	Does not bioaccumulate
Mobility	Dissociates into ions.
Biodegradability	Biodegradability does not pertain to inorganic substances.
Biochemical Oxygen Demand (BOD)	No data available
Other adverse effects:	No data available

SECTION 13 – DISPOSAL CONSIDERATION

Waste treatment methods:

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging: Dispose of as unused product.

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SECTION 14 – TRANSPORT INFORMATION (USDOT)

Proper shipping Name: Corrosive Liquid, N.O.S. (Contains Sodium Hydroxide)
Hazard Class: Corrosive (8)
UN/ID No UN1760
Packing Group II
Reportable Quantity (RQ) 3571 lbs (calculated)
Description: N/A



SECTION 15 – REGULATORY INFORMATION

TSCA (Toxic Substance Control Act): Components of this product are listed on the TSCA Inventory.

DSL: This product, or its components, are listed on or are exempt from the Canadian Domestic Substances List (DSL).

CERCLA: (Comprehensive Emergency Response Compensation, and Liability Act): Product is not found in “List of Hazardous Substances and Reportable Quantities” (40 CFR 302.4): None

RCRA: (Resource Conservation/Recovery Act): No

SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards: Acute Health Hazard

STATES: Massachusetts Right to Know Components, Pennsylvania Right To Know Components, New Jersey Right To Know Components: Potassium hydroxide CAS-No.1310-58-3

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16 – OTHER INFORMATION

Fire Protection Association (NFPA) Ratings:



NSF Certification: N/A

This Safety Data Sheet compiled from information provided by the raw chemical product manufacturers.

Disclaimer: The information presented herein is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet. However, no warranty or representation, expressed or implied, is made as to the accuracy or completeness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. In addition, no responsibility can be assumed by the vendor for any damage or injury resulting from abnormal use, from failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.