WHMIS/US OSHA Material Safety Data Sheet for:

Arctic Blend Boiler Compound

Section 1: MANUFACTURER/PREPARER INFORMATION & HAZARD WARNINGS

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WHMIS HAZARD SYMBOLS & DEFINITIONS

Class E: Corrosive material

Section 2: HEALTH HAZARD DATA

ROUTES OF ENTRY/SIGNS & SYMPTOMS OF ACUTE EXPOSURE:

SKIN & EYES: Highly corrosive; contact can cause severe irritation, burns and tissue destruction including permanent eye damage. **INHALATION:** Inhalation of mist may cause severe irritation to mucous membranes with injury to entire respiratory tract. **INGESTION:** Not orally toxic; however, product is corrosive to tissues of the mouth, throat and digestive tract. Swallowing may cause permanent internal injury and death.

Chronic Effects: Permanent injury from contact as described above. **Carcinogens:** None per NTP, IARC and OSHA. However, Potassium Hydroxide has been implicated as a cause of cancer of the esophagus in individuals who ingested the chemical. The cancer may develop 12 to 42 years after the ingestion incident. Similar cancers have been observed at the sites of severe thermal burns. These cancers may be due to tissue destruction and scar formation rather than the hydroxide itself. **Medical Conditions Aggravated by Exposure:** None known.

EMERGENCY & FIRST AID PROCEDURES:

EYES: Immediately flush with water, any delay may result in permanent damage. Remove contact lenses. Continue to flush for 15 minutes, including under eyelids and get prompt medical attention. **SKIN:** Immediately flood skin with water for 15 minutes. Remove contaminated clothing, preferably under shower. Wash thoroughly with soap and water. Get medical attention if burning persists. **INHALATION:** Immediately remove from mist exposure. Provide artificial respiration if needed. Keep person warm and at rest. Get prompt medical attention. **INGESTION:** Drink large quantities of water or milk to dilute. DO NOT INDUCE VOMITING. Call a physician or Poison Control Center immediately.

Section 3: PREVENTATIVE MEASURES

Respiratory Protection: If TLV in Section 4 is exceeded, use supplied air respirator with full facepiece, helmet or hood, or SCBA with full facepiece.

Ventilation: Local exhaust especially where possibility of mist formation exists.

Gloves: Rubber gloves required. **Eye Protection:** Dust proof and splash proof safety goggles. **Other Protective Equipment:** Apron or protective clothing and rubber boots (tops covered by apron or clothing to prevent entry of caustic).

Work/Hygienic Practices: Wash thoroughly after handling and before smoking or eating. Launder contaminated clothing. Discard contaminated shoes.

Handling and Storing: DO NOT PERMIT WORKERS TO HANDLE CAUSTIC SOLUTIONS WITHOUT PROPER TRAINING OR EQUIPMENT. Store in sealed containers protected from physical damage and segregated from incompatibles in Section 7. Avoid handling conditions which lead to spills or mist formation. Drains must have retention basins for pH adjustment and neutralization of spilled material. Have abundant running water and, where feasible, safety showers available where material is stored, unloaded or handled. FOR INDUSTRIAL USE ONLY.

KEEP OUT OF THE REACH OF CHILDREN AND ANIMALS.

N/A=Not Applicable. N/E=Not Evaluated/Established. N/R=Not Reported by Manufacturer.

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Section 4: HAZARDOUS COMPONENTS & EXPOSURE LIMITS

Hazardous Component Name	CAS #	OSHA PEL	ACGIH-TLV	Other Limit	% Wt
Sodium Lignosulfonate	68131-31-7	N/E	N/E	N/A	1-10
§ Potassium Hydroxide	1310-73-2	2 mg/m3	2 mg/m3	N/A	15-40

§ indicates a toxic chemical subject to the reporting requirements of SARA Title III, Section 313.
† indicates a chemical known to the State of California to cause cancer, birth defects or other reproductive harm per Proposition 65.

Section 5: PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point:	~140°C	**Specific Gravity:**	1.223
Vapor Pressure:	Solid 40-50 mmHg	**Percent Volatile:**	Unknown
Vapor Density (Air=1):	Unknown	**Evaporation Rate:**	Unknown
Solubility in Water:	N/A	**pH:**	>7
Appearance/Odor:	Black liquid/No odor.		

Section 6: FIRE & EXPLOSION HAZARD DATA

Flash Point (Method): None **Flammable Limits. LEL**N/A **UEL:** N/A

Extinguishing Media: Non-flammable. Use extinguishing media appropriate for surrounding fire.

Special Firefighting Procedures: Wear fire fighting protective equipment and a full faced SCBA. Cool fire-exposed containers with water spray.

Unusual Fire and Explosion Hazards: Potassium Hydroxide will react with metals such as aluminum, tin and zinc to generate flammable and explosive hydrogen gas.

Section 7: REACTIVITY DATA

Stability: Stable. **Hazardous Polymerization:** Will not occur. **Conditions to Avoid:** None noted. **Incompatibility:** Acids, many organic chemicals, especially nitrocarbons and halocarbons, leather, wool, aluminum, tin, zinc and their alloys. **Hazardous Decomposition Products:** Flammable hydrogen gas may be generated when KOH and certain metals react.

Section 8: SPILLS, DISPOSAL & ADDITIONAL INFORMATION

Spill/Leak Procedures: Pick up spill with vacuum equipment (alkali resistant) for disposal or flush to holding area with large amounts of water. **Neutralizing Agent:** 5% Acetic Acid.

Waste Disposal: Consult local environmental agency. Waste caustic must never be discharged to sewers or surface waters. First convert to neutral salts and dilute well with water. EPA—Corrosive waste.

Additional Information: None.