

# Material Safety Data Sheet

FOR INDUSTRIAL USE ONLY

ECOFLUX 150 MNL

## 1. Product and company identification

<b>Product name</b>	ECOFLUX 150 MNL
<b>MSDS Number</b>	300000016128
<b>Product Type</b>	Manual Flux
<b>Product use</b>	General Use Flux
<b>Manufacturer, Importer, Supplier</b>	HA International, LLC 630 Oakmont Lane Westmont, IL 60559
<b>Print date</b>	19-AUG-2010
<b>Telephone</b>	<b>For Emergency Medical Assistance</b> Call Health & Safety Information Services, 1-866-303-6949  <b>For Emergency Transportation Information</b> CHEMTREC US Domestic (800) 424-9300 CHEMTREC International (703) 527-3887 CANUTEC CA Domestic (613) 996-6666

For additional health and safety or regulatory information, call (630)575-5722, or (630)575-5705.

## 2. Hazards identification

<b>Form</b>	Crystalline solid.
<b>Odor</b>	none.
<b>OSHA/HCS status</b>	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.
<b>Emergency overview</b>	DAMP MATERIAL MAY PRESENT AN EXPLOSION HAZARD WHEN ADDED TO MOLTEN METAL. NEVER ADD DAMP MATERIAL TO MOLTEN METAL. MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
<b>Potential acute health effects</b>	
<b>Inhalation</b>	Slightly irritating to the respiratory system.
<b>Ingestion</b>	Not expected to be harmful under normal conditions of use.
<b>Skin</b>	Slightly irritating to the skin.
<b>Eyes</b>	Slightly irritating to the eyes.

### **Potential chronic health effects**

<b>Chronic effects</b>	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	No known significant effects or critical hazards.
<b>Mutagenicity</b>	No known significant effects or critical hazards.
<b>Teratogenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.
<b>Target organs</b>	Review Section 2 and 11 for any additional assessments.

### **Over-exposure signs/symptoms**

<b>Inhalation</b>	Adverse symptoms may include the following: respiratory tract irritation, coughing,
<b>Ingestion</b>	No specific data.
<b>Skin</b>	Adverse symptoms may include the following: irritation, redness,
<b>Eyes</b>	Adverse symptoms may include the following: irritation, watering, redness,
<b>Medical conditions aggravated by over-exposure</b>	None known.

See section 11 for more detailed information on health effects and symptoms.

## **3. Composition/Information on ingredients**

<b><u>Ingredient name</u></b>	<b><u>CAS number</u></b>	<b><u>WT %</u></b>
Potassium Chloride	7447-40-7	50.0 - 70.0

*\*\* Any applicable Canadian trade secret numbers will be listed in Section 15.*

## **4. First aid measures**

<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
<b>Skin contact</b>	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<b>Inhalation</b>	Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if adverse health effects persist or are severe.
<b>Ingestion</b>	Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an

unconscious person. Get medical attention immediately.

**Protection of first aid personnel**

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

**Notes to physician**

Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Individuals reporting respiratory irritation following use should be assessed for potential minor exposure to chlorine and treated accordingly.

See section 11 for more detailed information on health effects and symptoms.

## 5. Fire-fighting measures

**Flammability of the product**

This product is not flammable per OSHA definitions.

**Extinguishing media**

**Suitable**

Use an extinguishing agent suitable for the surrounding fire.

**Not suitable**

None known.

**Special exposure hazards**

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Hazardous combustion products**

Decomposition products may include the following materials: halogenated compounds, metal oxide/oxides, carbon monoxide, carbon dioxide, chlorine gas, hydrochloric acid vapor, irritating and toxic fumes and gasses .

**Special protective equipment for fire-fighters**

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 6. Accidental release measures

**Personal precautions**

No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

**Environmental precautions**

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**Large spill**

Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Do not reuse spilled material. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

**Small spill**

Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed

waste disposal contractor. Do not reuse spilled material.

## 7. Handling and storage

### Handling

Material should be free-flowing. Do not use damp or clumpy material. Addition of damp or clumpy material to molten metal may present and explosion hazard.

Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

### Storage

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Product may absorb moisture from the air. Immediately dispose of any material that is damp or clumpy. Use appropriate containment to avoid environmental contamination.

## 8. Exposure controls/personal protection

### Ingredient name

Chlorine

### Occupational exposure limits

#### **ACGIH TLV 8-hr TWA**

1.5 mg/m<sup>3</sup> 0.5 ppm

#### **ACGIH TLV STEL (15 min)**

2.9 mg/m<sup>3</sup> 1 ppm

#### **OSHA PEL Ceiling**

3 mg/m<sup>3</sup> 1 ppm

### **Consult local authorities for acceptable exposure limits.**

### **Recommended monitoring procedures**

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

### **Engineering measures**

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

### **Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

<b>Respiratory</b>	Follow all facility requirements when working near molten metal. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. When this material is added to molten metal in normal use, the following hazardous vapors may be generated: chlorine gas, hydrochloric acid vapor,
<b>Hands</b>	Follow all facility requirements when working near molten metal. Neoprene, nitrile, or natural rubber gloves are appropriate when handling material away from metal pouring or mixing area.
<b>Eyes</b>	Follow all facility requirements when working near molten metal. Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
<b>Skin</b>	Follow all facility requirements when working near molten metal. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
<b>Environmental exposure controls</b>	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## 9. Physical and chemical properties

<b>Form</b>	Crystalline solid.
<b>Color</b>	White
<b>Odor</b>	none.
<b>Solubility</b>	Soluble
<b>Density</b>	2.2 g/cm <sup>3</sup> Approx.

## 10. Stability and reactivity

<b>Stability</b>	The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.
<b>Conditions to avoid</b>	Product may absorb moisture from the air. Damp material may present an explosion hazard when added to molten metal.
<b>Materials to avoid</b>	Reactive or incompatible with the following materials: strong oxidizing agents, alkalis, iron,
<b>Hazardous decomposition products</b>	Decomposition products may include the following materials: carbon monoxide, carbon dioxide, chlorine gas, hydrochloric acid vapor, and other toxic or irritating vapors and gases.

## 11. Toxicological information

**Acute toxicity****Ingredient name**

Potassium Chloride

LD50 Oral

Rat

2,600 mg/kg

**Other Toxicological Information****Carcinogenicity****Classification****Ingredient name**

Potassium Chloride

ACGIH	Not classified
IARC	Not classified
NTP	Not listed
OSHA	Not regulated
EU	Not classified

**12. Ecological information****Environmental effects**

No known significant effects or critical hazards.

**Aquatic ecotoxicity****Ingredient name**

Potassium Chloride

Fresh water	Acute LC50 951 mg/l/96 h	Bluegill
Fresh water	Acute LC50 880 mg/l/96 h	Fathead minnow

**Other adverse effects**

No known significant effects or critical hazards.

**13. Disposal considerations****Waste disposal**

The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**14. Transport information**

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

**International transport regulations**

Regulatory information	UN/NA number	Proper shipping name	Classes/*PG	Reportable Quantity (RQ)
CFR		Non-regulated		
TDG		Non-regulated		
IMO/IMDG		Non-regulated		
IATA (Cargo)		Non-regulated		

\*PG : Packing group

## 15. Regulatory information

### US regulations

**HCS Classification** Not regulated

### **U.S. Federal regulations**

**SARA 311/312 Classification** Does not meet any hazard category

#### **SARA 313 - Supplier Notification**

This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.

None required.

**SARA 302 Extremely Hazardous Substances** None required.

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants** None required.

### **State regulations**

**Massachusetts RTK Substances** The following components are listed: Sodium Chloride,

**New Jersey RTK Hazardous Substances** None required.

**Pennsylvania RTK Hazardous Substances** The following components are listed: Sodium Chloride,

**California Prop. 65:** None required.

### Canada

**WHMIS (Canada)** Not controlled under WHMIS (Canada).

### **Canadian lists**

**Canadian NPRI:** None required.

### International regulations

#### **Chemical inventories**

Australia inventory (AICS) All components are listed or exempted.

Canada inventory All components are listed or exempted.

Europe inventory All components are listed or exempted.

Japan inventory All components are listed or exempted.

China inventory (IECSC) All components are listed or exempted.

Korea inventory All components are listed or exempted.

New Zealand Inventory (NZIoC) Not determined.

Philippines inventory (PICCS) All components are listed or exempted.

United States inventory (TSCA 8b) All components are listed or exempted.

## 16. Other information

### **Hazardous Material Information System III (U.S.A.)**

Health : 1  
Flammability: 0  
Physical hazards : 0  
Chronic :

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868. The customer is responsible for determining the PPE code for this material.

**Prepared by** Product Safety & Compliance Group, (630)575-5722, or (630)575-5705  
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