

# SAFETY DATA SHEET

EHC® Metals Reagent

SDS # : EHCM-C  
Revision date: 2016-03-02  
Version 1



## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product Identifier

**Product Name** EHC® Metals Reagent

**Alternate Commercial Name** EHC®-M

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Recommended Use:** For the remediation of contaminated groundwater

**Restrictions on Use:** Not for drinking water purification treatment.

### 1.3. Details of the supplier of the safety data sheet

**Manufacturer/Supplier**

PeroxyChem LLC  
2005 Market Street  
Suite 3200  
Philadelphia, PA 19103  
267/422-2400 (General Information)  
sdsinfo@peroxychem.com (E-Mail General Information)

### 1.4. Emergency telephone number

For leak, fire, spill or accident emergencies, call:  
1 800 / 424 9300 (CHEMTREC - U.S.A.)  
1 703 / 527 3887 (CHEMTREC - Collect - All Other Countries)  
1 303/ 389-1409 (Medical - U.S. - Call Collect)

## 2. HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

#### Regulation (EC) No 1272/2008

Not classified as a dangerous substances or preparation according to Regulation (EC) 1272/2008.

### 2.2. Label Elements

Not classified as a dangerous substances or preparation according to Regulation (EC) 1272/2008.

### 2.3. OTHER INFORMATION

#### General Hazards

CONTAINMENT HAZARD:.. Any vessel that contains wet EHC must be vented due to potential pressure build up from fermentation gases.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	EC-No	CAS-No	Weight %	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Potassium Magnesium Sulfate	-	14977-37-8	25-35		NA
Iron	Present	7439-89-6	25-35	-	01-2119462838-24-XXX X
Organic amendment	Listed	-	25-35	-	NA
Lecithin	Present	8002-43-5	3	-	NA
Viscosity modifier	Listed	-	0 - 10%	-	NA
Sodium chloride	Present	7647-14-5	2	-	01-2119485491-33-xxxx

## 4. FIRST AID MEASURES

### 4.1. Description of first-aid measures

#### Skin Contact

Wash off with soap and water.

#### Eye Contact

In case of contact, immediately flush skin with plenty of water. Get medical attention if irritation develops and persists.

#### Inhalation

Remove person to fresh air. If signs/symptoms continue, get medical attention.

#### Ingestion

Rinse mouth with water and afterwards drink plenty of water or milk. Call a poison control center or doctor immediately for treatment advice. Never give anything by mouth to an unconscious person.

### 4.2. Most important symptoms and effects, both acute and delayed

**Most important symptoms and effects, both acute and delayed** Inhalation of dust in high concentration may cause irritation of respiratory system

### 4.3. Indication of immediate medical attention and special treatment needed, if necessary

#### Indication of immediate medical

Treat symptomatically.

attention and special treatment needed, if necessary

## 5. FIRE-FIGHTING MEASURES

### **5.1. Extinguishing media**

#### **Suitable Extinguishing Media**

Dry chemical, CO<sub>2</sub>, sand, earth, water spray or regular foam

### **5.2. Special hazards arising from the substance or mixture**

#### **Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases**

Dry or powdered ingredients are combustible. Dispersal of finely divided dust from products into air may form mixtures that are ignitable or explosive. Minimize airborne dust generation and eliminate sources of ignition.

### **5.3. Advice for firefighters**

#### **Special protective equipment for fire-fighters**

As in any fire, wear self-contained breathing apparatus and full protective gear.

## **6. ACCIDENTAL RELEASE MEASURES**

### **6.1. Personal precautions, protective equipment and emergency procedures**

Avoid dust formation. Avoid dispersal of dust in the air (i.e., cleaning dust surfaces with compressed air.). For personal protection see Section 8.

### **6.2. Environmental Precautions**

Recover the product in solid form, if possible. Do not flush into surface water or sanitary sewer system.

### **6.3. Methods and materials for containment and cleaning up**

Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Sweep or vacuum up spillage and return to container. The waste may be recovered and recycled.

Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Use only non-sparking tools.

### **6.4. Reference to other sections.**

See section 13 for disposal information.

## **7. HANDLING AND STORAGE**

### **7.1. Precautions for Safe Handling**

Minimize dust generation and accumulation. Keep away from open flames, hot surfaces and sources of ignition. Refer to Section 8.

### **7.2. Conditions for safe storage, including any incompatibilities**

#### **Storage**

Keep tightly closed in a dry and cool place. Keep away from open flames, hot surfaces and sources of ignition. Any vessel that contains wet EHC must be vented due to potential pressure build up from fermentation gases.

#### **Materials to avoid**

Strong acids.

### **7.3. Specific end uses**

See subsection 1.2. Relevant identified uses of the substance or mixture and uses advised against

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **8.1. Control parameters**

## Exposure Limits

Ingredients with workplace control parameters

Chemical name	Slovakia	Switzerland	Belgium
Iron 7439-89-6	TWA 6.0 mg/m <sup>3</sup>		
Chemical name	Latvia	Lithuania	Czech Republic
Sodium chloride 7647-14-5	TWA 5 mg/m <sup>3</sup>	TWA 5 mg/m <sup>3</sup>	
Chemical name	Romania	Bulgaria	Russia
Iron 7439-89-6		TWA 6.0 mg/m <sup>3</sup>	TWA 10 mg/m <sup>3</sup>
Sodium chloride 7647-14-5			MAC 5 mg/m <sup>3</sup>

**8.2. Exposure Controls****Engineering measures**

It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in the handling of this product contain explosion relief vents or an explosion suppression or an oxygen-deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.

**Personal protective equipment****Respiratory Protection**

In case of inadequate ventilation wear respiratory protection. The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses.

**Eye/Face Protection**

Safety glasses with side-shields

**Skin and Body Protection**

No special precautions required.

**Hand Protection**

Use gloves if extended exposure is anticipated

**Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product.

**Environmental exposure controls**

No special environmental precautions required.

**9. PHYSICAL AND CHEMICAL PROPERTIES****9.1. Information on basic physical and chemical properties**

Appearance	Light-tan powder
Color	Light tan
Physical State	Solid
Odor	odorless
Odor threshold	Not applicable
pH	5.6 (as aqueous solution)
Flash point	No information available
Melting Point/Range	No information available
Freezing Point	No information available
Boiling Point/Range	No information available
Autoignition temperature	248 - 266 °C
Flammability Limits in Air	
Upper flammability limit:	46.0
Lower flammability limit:	3.3
Explosive properties	Low level dust explosion hazard
Vapor pressure	No information available
Vapor density	No information available
Density	1.03 g/mL
Partition coefficient	No information available

<b>Water solubility</b>	practically insoluble
<b>Viscosity</b>	No information available
<b>Evaporation Rate</b>	No information available

## **9.2. OTHER INFORMATION**

<b>Bulk Density</b>	No information available
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## **10. STABILITY AND REACTIVITY**

### **10.1. Reactivity**

None under normal use conditions

### **10.2. Chemical Stability**

Stable under recommended storage conditions.

### **10.3. Possibility of Hazardous Reactions**

Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

### **10.4. Conditions to avoid**

Heat, flames and sparks.

### **10.5. incompatible materials**

Strong acids.

### **10.6. Hazardous Decomposition Products**

Carbon oxides (COx); Sulfur oxides.

## **11. TOXICOLOGICAL INFORMATION**

### **11.1. Information on toxicological effects**

#### **Acute toxicity**

The product has not been tested. Data is based on component.

<b>LD50 Dermal</b>	No information available
<b>LD50 Oral</b>	Iron: 98.6 g/kg (rat)
<b>LC50 Inhalation</b>	Iron: > 100 mg/m <sup>3</sup> 6 hr (rat)

<b>Skin Contact</b>	Does not pose a potential of skin irritation and sensitization.
<b>Eye Contact</b>	Expected to be non-irritating based on ingredients.
<b>Inhalation</b>	Inhalation of dust in high concentration may cause irritation of respiratory system.
<b>Ingestion</b>	Low order of toxicity based on components.

#### **Chronic toxicity**

<b>Sensitization</b>	As a precaution the product should be treated as a sensitizer.
<b>Neurological effects</b>	None known.
<b>Target organ effects</b>	No known effects under normal use conditions.
<b>Carcinogenicity</b>	Contains no ingredient listed as a carcinogen.
<b>Mutagenicity</b>	This product is not recognized as mutagenic by Research Agencies

## **12. ECOLOGICAL INFORMATION**

**12.1. Toxicity****Ecotoxicity effects**

Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to Microorganisms	Toxicity to daphnia and other aquatic invertebrates
Iron		96 h LC50: = 13.6 mg/L (Morone saxatilis) static		
Sodium chloride		96 h LC50: 5560 - 6080 mg/L (Lepomis macrochirus) flow-through 96 h LC50: = 12946 mg/L (Lepomis macrochirus) static 96 h LC50: 6020 - 7070 mg/L (Pimephales promelas) static 96 h LC50: 6420 - 6700 mg/L (Pimephales promelas) static 96 h LC50: 4747 - 7824 mg/L (Oncorhynchus mykiss) flow-through 96 h LC50: = 7050 mg/L (Pimephales promelas) semi-static		48h EC50: 1000 mg/l Daphnia magna; 48h EC50: 340.7 - 469.2 Daphnia magna Static

**12.2. Persistence and degradability**

The organic components are biodegradable and can be expected to contribute to BOD.

**12.3. Bioaccumulative potential**

Bioaccumulation is unlikely.

**12.4. Mobility in soil**

Is not likely mobile in the environment due its low water solubility.

**12.5. Results of PBT and vPvB assessment**

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT)

**12.6. Other Adverse Effects**

None known.

**13. DISPOSAL CONSIDERATIONS****13.1. Waste treatment methods**

**Waste from residues / unused products** Where possible recycling is preferred to disposal or incineration  
If recycling is not practicable, dispose of in compliance with local regulations

**Contaminated Packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. TRANSPORT INFORMATION**

**ADR/RID** NOT REGULATED

**IMDG/IMO** NOT REGULATED

ICAO/IATA

NOT REGULATED

**15. REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****International Inventories**

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELI NCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines )	AICS (Australia)	NZIoC (New Zealand)
Iron 7439-89-6	X	X	X	-	X	X	X	X	X
Organic amendment	-	X	X	-	X	-	X	X	X
Lecithin 8002-43-5	X	X	X	-	X	X	X	X	X
Viscosity modifier	X	X	X	X	X	X	X	X	X
Sodium chloride 7647-14-5	X	X	X	X	X	X	X	X	X

**15.2. Chemical Safety Report**

Not Applicable.

**16. OTHER INFORMATION**

Issuing Date: 2015-07-14

**Restrictions on Use:**

Not for use in potable drinking water This product's foreseen or recommended applications are: For the remediation of contaminated groundwater

Revision date: 2016-03-02

Revision note: Initial Release.

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Prepared By:

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**End of Safety Data Sheet**