

# SAFETY DATA SHEET

## EHC® Plus

SDS # : SG1R  
Revision date: 2018-01-10  
Format: NA  
Version 1.01



### 1. PRODUCT AND COMPANY IDENTIFICATION

#### Product Identifier

**Product Name** EHC® Plus  
**Alternate Commercial Name** EHC® +

#### Recommended use of the chemical and restrictions on use

**Recommended Use:** Remediation of contaminated soil and groundwater  
**Restrictions on Use** Not for use in potable drinking water.

#### Manufacturer/Supplier

PeroxyChem LLC  
2005 Market Street  
Suite 3200  
Philadelphia, PA 19103  
Phone: +1 267/ 422-2400 (General Information)  
E-Mail: sdsinfo@peroxychem.com

#### Emergency telephone numbers

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

#### Classification

##### **OSHA Regulatory Status**

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Combustible dust

#### GHS Label elements, including precautionary statements

#### **EMERGENCY OVERVIEW**

##### **Warning**

##### **Hazard Statements**

May form combustible dust concentrations in air

**Precautionary Statements - Prevention**

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.

**Hazards not otherwise classified (HNOC)**

No hazards not otherwise classified were identified.

**Other Information**

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	CAS-No	Weight %
Iron	7439-89-6	15 - 50
Organic amendment	Proprietary	35-70
Soybean oil	8001-22-7	0 - 2
Activated carbon	7440-44-0	10-20
Viscosity modifier	Proprietary	0-5

**4. FIRST AID MEASURES**

<b>Eye Contact</b>	In case of contact, immediately flush skin with plenty of water. Get medical attention if irritation develops and persists.
<b>Skin Contact</b>	Wash off with soap and water. If skin irritation persists, call a physician.
<b>Inhalation</b>	Remove person to fresh air. If signs/symptoms continue, get medical attention.
<b>Ingestion</b>	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.
<b>Most important symptoms and effects, both acute and delayed</b>	Inhalation of dust in high concentration may cause irritation of respiratory system.
<b>Indication of immediate medical attention and special treatment needed, if necessary</b>	Treat symptomatically

## 5. FIRE-FIGHTING MEASURES

<b>Suitable Extinguishing Media</b>	Dry chemical, CO <sub>2</sub> , sand, earth, water spray or regular foam.
<b>Unsuitable extinguishing media</b>	Do not use a solid water stream as it may scatter and spread fire.
<b>Specific Hazards Arising from the Chemical</b>	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.
<b>Flammable properties</b>	Combustible material
<b>Explosion data</b>	
<b>Sensitivity to Mechanical Impact</b>	Not sensitive.
<b>Sensitivity to Static Discharge</b>	Not sensitive.
<b>Protective equipment and precautions for firefighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Avoid dust formation. Avoid dispersal of dust in the air (i.e., cleaning dust surfaces with compressed air.). For personal protection see Section 8.
<b>Other</b>	Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Use only non-sparking tools.
<b>Environmental Precautions</b>	Recover the product in solid form, if possible. Do not flush into surface water or sanitary sewer system.
<b>Methods for Containment</b>	Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry.
<b>Methods for cleaning up</b>	Sweep or vacuum up spillage and return to container. The waste may be recovered and recycled.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Minimize dust generation and accumulation. Keep away from open flames, hot surfaces and sources of ignition. Refer to Section 8.
<b>Storage</b>	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.
<b>Incompatible products</b>	Oxidizing agents Strong acids.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

<b>Exposure Guidelines</b>	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies. Local nuisance dust standards apply.
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Chemical name	ACGIH TLV	OSHA PEL	NIOSH	Mexico
Activated carbon 7440-44-0	-	-	-	Mexico: TWA 2 mg/m <sup>3</sup>
PNOC	TWA: 10 mg/m <sup>3</sup> TWA: 3 mg/m <sup>3</sup>	TWA: 15 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	-	-
Chemical name	British Columbia	Quebec	Ontario TWAEV	Alberta
PNOC	TWA: 10 mg/m <sup>3</sup> TWA: 3 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> inhalable	TWA: 10 mg/m <sup>3</sup> TWA: 3 mg/m <sup>3</sup>

			TWA: 3 mg/m <sup>3</sup> respirable	
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### Appropriate engineering 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.

### Individual protection measures, such as personal protective equipment

**Eye/Face Protection** Safety glasses with side-shields.

**Skin and Body Protection** Wear suitable protective clothing. Protective shoes or boots.

**Hand Protection** Use gloves if extended exposure is anticipated

**Respiratory Protection** Whenever dust in the worker's breathing zone cannot be controlled with ventilation or other engineering means, workers should wear respirators or dust masks approved by NIOSH/MSHA, EU CEN or comparable organization to protect against airborne dust.

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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Appearance</b>	Tan Brown Flakes,
<b>Physical State</b>	Solid
<b>Color</b>	No information available
<b>Odor</b>	odorless
<b>Odor threshold</b>	Not applicable
<b>pH</b>	5.6 (as aqueous solution)
<b>Melting point/freezing point</b>	No information available
<b>Boiling Point/Range</b>	No information available
<b>Flash point</b>	Not applicable
<b>Evaporation Rate</b>	No information available
<b>Flammability (solid, gas)</b>	Combustible material
<b>Flammability Limit in Air</b>	
<b>Upper flammability limit:</b>	No information available
<b>Lower flammability limit:</b>	No information available
<b>Vapor pressure</b>	No information available
<b>Vapor density</b>	No information available
<b>Density</b>	0.80 g/mL
<b>Specific gravity</b>	No information available
<b>Water solubility</b>	practically insoluble
<b>Solubility in other solvents</b>	No information available
<b>Partition coefficient</b>	No information available
<b>Autoignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available
<b>Viscosity, kinematic</b>	No information available
<b>Viscosity, dynamic</b>	No information available
<b>Explosive properties</b>	Low level dust explosion hazard
<b>K<sub>st</sub></b>	19 bar-m/sec: St1 Class dust
<b>Oxidizing properties</b>	No information available
<b>Molecular weight</b>	No information available
<b>Bulk density</b>	No information available

## 10. STABILITY AND REACTIVITY

### Reactivity

<b>Chemical Stability</b>	Stable.
<b>Possibility of Hazardous Reactions</b>	None under normal processing.
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Heat, flames and sparks.
<b>Incompatible materials</b>	Strong acids. Oxidizing agents.
<b>Hazardous Decomposition Products</b>	Burning produces obnoxious and toxic fumes.

## 11. TOXICOLOGICAL INFORMATION

### Product Information

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

**Sensitization** As a precaution the product should be treated as a sensitizer.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation	NOAEL Oral Value
Iron (7439-89-6)	98600 mg/kg ( Rat )			
Activated carbon (7440-44-0)	> 10000 mg/kg ( Rat )			

### Information on toxicological effects

**Symptoms** Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Chronic toxicity** Activated carbon may contain small amounts of crystalline silica, which has been listed as a potential carcinogen by the International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP). Respiratory protection should be worn whenever airborne dust is present.

**Carcinogenicity** There are no known carcinogenic chemicals in this product.

**Mutagenicity** This product is not recognized as mutagenic by Research Agencies

**Reproductive toxicity** This product does not contain any known or suspected reproductive hazards.

**STOT - single exposure** No information available.  
**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

**12. ECOLOGICAL INFORMATION****Ecotoxicity****Ecotoxicity effects** Not expected to have significant environmental effects

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		

**Persistence and degradability** The organic components are biodegradable and can be expected to contribute to BOD.**Bioaccumulation** Does not bioaccumulate.**Mobility** Is not likely mobile in the environment due its low water solubility.**Other Adverse Effects** None known.**13. DISPOSAL CONSIDERATIONS****Waste disposal methods** Recovery/recycling recommended. Can be landfilled or incinerated, when 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****DOT** NOT REGULATED**15. REGULATORY INFORMATION****U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**

This product is not subject to reporting under the Emergency Planning and Community Right-to-Know rule.

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA/EPCRA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

**US State Regulations****U.S. State Right-to-Know Regulations**

This product contains the following substances regulated under state Right-to-Know laws:

Chemical name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Soybean oil			X		

**California Proposition 65**

This product does not contain any Proposition 65 chemicals

**CANADA****Environmental Emergencies**

This product contains no substances listed under Canada's Environmental Emergency regulations.

**Canadian National Pollutant Release Inventory**

This product contains no substances reportable under Canada's National Pollutant Release Inventory regulations.

**International Inventories**

Component	TSCA (United States)	DSL (Canada)	EINECS/EL INCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines )	AICS (Australia)	NZIoC (New Zealand)
Iron 7439-89-6 ( 15 - 50 )	X	X	X		X	X	X	X	X
Organic amendment ( 35-70 )		X	X		X		X	X	X
Soybean oil 8001-22-7 ( 0 - 2 )	X	X	X		X	X	X	X	X
Activated carbon 7440-44-0 ( 10-20 )	X	X	X		X	X	X	X	X

**Mexico****16. OTHER INFORMATION**

NFPA	Health Hazards 1	Flammability 1	Stability 0	Special Hazards -
HMIS	Health Hazards 1	Flammability 1	Physical hazard 0	Personal Protection -

NFPA/HMIS Ratings Legend Severe = 4; Serious = 3; Moderate = 2; Slight = 1; Minimal = 0

**References**

Refer to NFPA 654, *Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids*, for safe handling.

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**Prepared By:**

PeroxyChem

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**End of Safety Data Sheet**