

# SAFETY DATA SHEET

## EHC® Plus

SDS #: SG1R  
Revision date: 2019-02-21  
Version 1.01



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

#### 1.1. Product Identifier

Product Name EHC® Plus

Alternate Commercial Name EHC® +

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

Recommended Use: Remediation of contaminated soil and groundwater

Restrictions on Use Not for use in potable drinking water.

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

##### Supplier

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

#### 1.4. Emergency telephone numbers

For leak, fire, spill or accident emergencies, call:  
+1 703-527-3887 (CHEMTREC)

## 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

Component	EC-No	CAS-No	Weight %	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Iron 7439-89-6 ( 15 - 50 )	Present	7439-89-6	15 - 50	-	01-2119462838-24-XX XX
Organic amendment ( 35-70 )	Listed	-	35-70	-	NA
Soybean oil 8001-22-7 ( 0 - 2 )	Present	8001-22-7	0 - 2		NA
Activated carbon 7440-44-0 ( 10-20 )	Present	7440-44-0	10-20		01-2119966900-32-0000
Viscosity modifier ( 0-5 )	Listed	-	0-5	-	NA

## 4. FIRST AID MEASURES

### 4.1. Description of first-aid measures

#### Skin Contact

Wash off with soap and water. If skin irritation persists, call a physician.

#### 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

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 attention and special treatment needed, if necessary

Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

### 5.1. Extinguishing media

#### **Suitable Extinguishing Media**

Dry chemical, CO2, 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**

Dusts or fumes may form explosive mixtures in air. May be ignited by heat, sparks or flames.

### 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.

For personal protection see Section 8. Dispose of waste as indicated in Section 13

## 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	European Union	The United Kingdom	Ireland
PNOC			TWA 10 mg/m <sup>3</sup> TWA 4 mg/m <sup>3</sup> STEL 30 mg/m <sup>3</sup> STEL 12 mg/m <sup>3</sup>
Chemical name	France	Spain	Portugal
PNOC	TWA 10 mg/m <sup>3</sup> TWA 5 mg/m <sup>3</sup>	TWA 10 mg/m <sup>3</sup> TWA 3 mg/m <sup>3</sup>	TWA 10 mg/m <sup>3</sup> TWA 3 mg/m <sup>3</sup>
Chemical name	Denmark	Finland	Norway
PNOC			TWA 10 mg/m <sup>3</sup> TWA 5 mg/m <sup>3</sup> STEL 20 mg/m <sup>3</sup> STEL 10 mg/m <sup>3</sup>
Chemical name	Sweden	Austria	Slovenia
Activated carbon 7440-44-0		STEL 10 mg/m <sup>3</sup> TWA 5 mg/m <sup>3</sup>	
Chemical name	Slovakia	Switzerland	Belgium
Iron 7439-89-6	TWA 6.0 mg/m <sup>3</sup>		
Chemical name	Luxembourg	Poland	Estonia
Activated carbon 7440-44-0		TWA 4.0 mg/m <sup>3</sup> TWA 1.0 mg/m <sup>3</sup> TWA 6.0 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>

**Legend:** PNOC: Particles not otherwise classified

**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**  
**Eye/Face Protection**  
**Skin and Body Protection**  
**Hand Protection**

In case of insufficient ventilation wear suitable respiratory equipment.  
 Safety glasses with side-shields  
 Wear suitable protective clothing.  
 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**

Local authorities should be advised if significant spillages cannot be contained.

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

Appearance	Tan Brown Flakes
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	No information available
Explosive properties	Low level dust explosion hazard
Vapor pressure	No information available
Vapor density	No information available
Density	0.80 g/mL
Partition coefficient	No information available
Water solubility	practically insoluble
Viscosity	No information available
Evaporation Rate	No information available

## 9.2. OTHER INFORMATION

Bulk Density	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

None under normal processing.

### 10.4. Conditions to avoid

Heat, flames and sparks.

### 10.5. incompatible materials

Strong acids.

### 10.6. Hazardous Decomposition Products

Burning produces obnoxious and toxic fumes.

## **11. TOXICOLOGICAL INFORMATION**

### 11.1. Information on toxicological effects

#### Acute toxicity

This product is expected to have low oral, dermal and inhalation toxicity.

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

Skin Contact	Expected to be non-irritating based on ingredients.
Eye Contact	Expected to be non-irritating based on ingredients.

#### Chronic toxicity

Sensitization	As a precaution the product should be treated as a sensitizer.
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**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 is not recognized as reprotox by Research Agencies

**12. ECOLOGICAL INFORMATION****12.1. Toxicity****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		48 h Daphnia magna EC50 = 8934.78 mg/l

**12.2. Persistence and degradability**

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

**12.3. Bioaccumulative potential**

Does not bioaccumulate.

**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** Dispose of in accordance with local regulations.**Product / Packaging disposal** Dispose of in accordance with all applicable national environmental laws and 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
Soybean oil 8001-22-7	X	X	X	-	X	X	X	X	X
Activated carbon 7440-44-0	X	X	X	-	X	X	X	X	X
Viscosity modifier	X	X	X	X	X	X	X	X	X

#### Directive 2008/98/EC on waste

Does not apply

#### Major Accidents (Directive 2012/18/EU)

Not applicable

#### CWC (Chemical Weapons Convention) - Annex on Chemicals

Not applicable

#### EU Export and import of dangerous chemicals (Regulation (EC) No 304/2003)

Not Applicable

### 15.2. Chemical Safety Report

Not Applicable.

## 16. OTHER INFORMATION

#### Full text of H-phrases referred to in sections 2 and 3

None

**Issuing Date:** 2015-07-14

#### Restrictions on Use

This product's foreseen or recommended applications are: Remediation of contaminated soil and groundwater

**Revision date:** 2019-02-21

**Revision note** Initial Release

#### List of Abbreviations and Acronyms

ATE Acute Toxicity Estimate  
 ADR European Agreement concerning the International Carriage of Dangerous Goods by Road  
 AND European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
 CE50 Concentración Efectiva Media  
 CEN European Committee for Standardisation  
 C&L Classification and Labelling  
 CLP Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008  
 CLV Ceiling Limit Value Par CAS# Chemical Abstracts Service number  
 CMR Carcinogen, Mutagen, or Reproductive Toxicant  
 CSA Chemical Safety Assessment  
 CSR Chemical Safety Report  
 DNEL Derived No Effect Level  
 DOT Department of Transportation  
 DPD Dangerous Preparations Directive 1999/45/EC  
 DSD Dangerous Substances Directive 67/548/EEC

DU Downstream User  
EC European Community  
ECHA European Chemicals Agency  
EC-Number EINECS and ELINCS Number (see also EINECS and ELINCS)  
EEA European Economic Area (EU + Iceland, Liechtenstein and Norway)  
EEC European Economic Community  
EINECS European Inventory of Existing Commercial Substances  
ELINCS European List of notified Chemical Substances  
EN European Standard  
EQS Environmental Quality Standard  
EU European Union  
Euphrac European Phrase Catalogue EWC  
European Waste Catalogue (replaced by LoW –see below)  
FDS Ficha de Datos de Seguridad  
GES Generic Exposure Scenario  
GHS Globally Harmonized System  
IATA International Air Transport Association  
ICAO-TI Technical Instructions for the Safe Transport of Dangerous Goods by Air  
IMDG International Maritime Dangerous Goods  
IMO International Maritime Organization  
IMSBC International Maritime Solid Bulk Cargoes  
IT Information Technology  
IUCLID International Uniform Chemical Information Database  
IUPAC International Union for Pure Applied Chemistry  
JRC Joint Research Centre  
Kow octanol-water partition coefficient  
LC50 Lethal Concentration to 50 % of a test population Lethal Dose to 50% of a test population (Median Lethal Dose)  
LE Legal Entity  
LLV Level Limit Value  
LoW List of Wastes (see <http://ec.europa.eu/environment/waste/framework/list.htm>)  
LR Lead RegistrantM/I Manufacturer / Importer MS Member States  
MSDS Material Safety Data Sheet  
NOEC No observed effect concentration  
OC Operational Conditions  
OECD Organization for Economic Co-operation and Development  
OEL Occupational Exposure Limit  
OJ Official Journal  
OR Only Representative  
OSHA European Agency for Safety and Health at work  
PBT Persistent, Bioaccumulative and Toxic substance  
PEC Predicted Effect Concentration  
PNEC(s) Predicted No Effect Concentration(s)  
PPE Personal Protection Equipment  
(Q)SAR Qualitative Structure Activity Relationship  
RCR Risk Characterization ratio  
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006  
RID Regulations concerning the International Carriage of Dangerous Goods by Rail  
RIP REACH Implementation Project  
RMM Risk Management Measure  
SADT Self-accelerating decomposition temperature  
SCBA Self-Contained Breathing Apparatus  
SDS Safety data sheet  
SIEF Substance Information Exchange Forum  
SME Small and Medium sized Enterprises  
STEL Short-term exposure limit  
STOT Specific Target Organ Toxicity (STOT)  
RE Repeated Exposure(STOT)  
SE Single Exposure Par SVHC Substances of Very High Concern  
TSCA Toxic Substances Control Act  
TWA Time Weighed Average  
UN United Nations



vPvB Very Persistent and Very Bioaccumulative / mPmB Muy Persistente y Muy Bioacumulativo  
WGK Wassergefährdungsklassen

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**End of Safety Data Sheet**

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