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

1.1. Product Identifier

Product Name: EHC® Liquid Mix
Alternate Commercial Name: EHC®-L Mix; EHC® Liquid - Solid Component
Pure substance/mixture: Mixture

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

Recommended Use: Bioremediation product for the remediation of contaminated soil and 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 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

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

The preparation is not classified in accordance with Directive 1272/2008.

Occupational exposure limits, if available, are listed in section 8.

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. Dust cloud can be ignited by a spark

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>EC-No</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
<th>REACH registration number</th>
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</tbody>
</table>

Occupational exposure limits, if available, are listed in section 8

4. FIRST AID MEASURES

4.1. Description of first-aid measures

Skin Contact  
Wash off with warm water and soap. Get medical attention if irritation develops and persists.

Eye Contact  
Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids intermittently. Consult a physician.

Inhalation  
Remove from exposure, lie down. If symptoms persist, call a physician.

Ingestion  
If swallowed, do not induce vomiting - seek medical advice.

Protection of first-aiders  
No information available.

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

Gastrointestinal effects. 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
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2. Special hazards arising from the substance or mixture

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases
Dust may form explosive mixture in air.

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

For personal protection see Section 8. Avoid dispersal of dust in the air (i.e., cleaning dust surfaces with compressed air.). Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area).

6.2. Environmental Precautions

Prevent undiluted spillage from entering sewers, basements or watercourses.

6.3. Methods and materials for containment and cleaning up

Sweep or vacuum up spillage and return to container. Avoid wetting dust and clean up as a dry powder with appropriate PPE for handling dry dusty materials; store in containers that keep material dry, segregated but allow to vent. Avoid dispersal of dust in the air (i.e., cleaning dust surfaces with compressed air.). Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Material may be recycled when contamination is not a problem. Following product recovery, flush area with water.

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. See section 13 for disposal information.
7. HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Ensure adequate ventilation. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powdered material can build static electricity when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmosphere.

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.

Materials to avoid
Strong oxidizing agents

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

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Latvia</th>
<th>Lithuania</th>
<th>Czech Republic</th>
</tr>
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<tbody>
<tr>
<td>amino acid</td>
<td>TWA 2 mg/m³</td>
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</tbody>
</table>

8.2. Exposure Controls

Engineering measures

Ensure adequate ventilation, especially in confined areas. 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 insufficient ventilation wear suitable respiratory equipment. P2 Dust mask when airborne dust concentrations elevated. 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
Protective gloves

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls
No special environmental precautions required.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties
EHC® Liquid Mix

Appearance: Dry powder
Color: light gray
Physical State: Solid
Odor: Slight
Odor threshold: No information available
pH: 4.5 (1% solution)
Flash point: Not applicable
Melting Point/Range: Decomposes on heating 100 °C
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
Partition coefficient: No information available
Water solubility: Fairly soluble
Viscosity: No information available
Evaporation Rate: No information available

9.2. OTHER INFORMATION
Bulk Density
No information available

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
To avoid thermal decomposition, do not overheat.

10.5. incompatible materials
Strong oxidizing agents.

10.6. Hazardous Decomposition Products
Carbon oxides (COx)

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects
Acute toxicity
**11. ACUTE TOXICITY**

- **LD₅₀ Dermal**: No information available.
- **LD₅₀ Oral**: Iron Salt: 2100 mg/kg (guinea pig), Cysteine: 1890 mg/kg (rat).
- **LC₅₀ Inhalation**: No information available.

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

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

**Chronic toxicity**

- **Sensitization**: Not expected to be sensitizing based on the components.
- **Carcinogenicity**: Contains no ingredient listed as a carcinogen.
- **Mutagenicity**: This product is not recognized as mutagenic by Research Agencies.
- **Reproductive toxicity**: This product does not contain any known or suspected reproductive hazards.

**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.

**12.2. Persistence and degradability**

Product is biodegradable.

**12.3. Bioaccumulative potential**

No information available.

**12.4. Mobility in soil**

No information available.

**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**: If recycling is not practicable, dispose of in compliance with local regulations.
- **Product / Packaging disposal**: Dispose of as hazardous waste in compliance with local and national regulations.
- **Contaminated Packaging**: Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. TRANSPORT INFORMATION**
ADRs/RIDs

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

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>TSCA (United States)</th>
<th>DSL (Canada)</th>
<th>EINECS/ELINCS (Europe)</th>
<th>ENCS (Japan)</th>
<th>China (IECSC)</th>
<th>KECL (Korea)</th>
<th>PICCS (Philippines)</th>
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<td>X</td>
<td>X</td>
<td>X</td>
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</tr>
</tbody>
</table>

Directive 2008/98/EC on waste
Not applicable

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

Water contamination class (Germany):
WGK 1

Regulation 98/2013 on the marketing and use of explosives precursors
Not Applicable

15.2. Chemical Safety Report

Not Applicable.

16. OTHER INFORMATION

Issuing Date: 2016-01-26

Restrictions on Use
Not for use in potable drinking water. This product’s foreseen or recommended applications are: Bioremediation product for the remediation of contaminated soil and groundwater.

Revision date: 2016-02-09

Revision note: SDS sections updated 9

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 MediaCEN 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
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
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 Registrant M/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
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
EHC® Liquid Mix

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