

SAFETY DATA SHEET

DARAMEND® Reagent

SDS #: DARR-C
Revision date: 2016-02-09
Version 1



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

1.1. Product Identifier

Product Name DARAMEND® Reagent

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: No uses to be advised against were identified

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

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

2.2. Label Elements

Not classified

2.3. OTHER INFORMATION

General Hazards

CONTAINMENT HAZARD: Any vessel that contains wet DARAMEND must be vented due to potential pressure build up from fermentation gases. Powdered material may form explosive dust-air mixtures

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	EC-No	CAS-No	Weight %	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Lecithin	Present	8002-43-5	3	-	NA
Iron	Present	7439-89-6	40-50	-	01-2119462838-24-XXX X
Organic amendment	Listed	-	50-60	-	NA

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 soap and water. In the case of skin irritation or allergic reactions see 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

Most important symptoms and effects, both acute and delayed Coughing and/ or wheezing

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**

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. Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). For personal protection see Section 8.

6.2. Environmental Precautions

No special environmental precautions required.

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.

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 DARAMEND must be vented due to potential pressure build up from fermentation gases.

Materials to avoid

Oxidizing agents. 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	TWA 6.0 mg/m ³		

7439-89-6			
Chemical name	Romania	Bulgaria	Russia
Iron		TWA 6.0 mg/m ³	TWA 10 mg/m ³
7439-89-6			

8.2. Exposure Controls

Engineering measures

Provide appropriate exhaust ventilation at places where dust is formed. 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.

Personal protective equipment

Respiratory Protection

In case of insufficient ventilation wear suitable respiratory equipment.

Eye/Face Protection

Safety glasses with side-shields

Skin and Body Protection

No special protective equipment required.

Hand Protection

No special precautions required

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 information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Flakes
Color	Tan, Brown
Physical State	Solid
Odor	No information available
Odor threshold	No information available
pH	6.0
Flash point	No information available
Melting Point/Range	No information available
Freezing Point	No information available
Boiling Point/Range	Decomposes upon heating
Autoignition temperature	No information available
Explosive properties	Low level dust explosion hazard
Vapor pressure	No information available
Vapor density	Not applicable
Density	0.97 kg/L
Partition coefficient	No information available
Water solubility	Insoluble in water
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

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

Oxidizing agents. Strong acids.

10.6. Hazardous Decomposition Products

Burning produces obnoxious and toxic fumes

11. TOXICOLOGICAL INFORMATION**11.1. Information on toxicological effects****Acute toxicity**

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

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

Skin Contact	Not expected to be irritating based on the components.
Eye Contact	Product dust may cause mechanical eye irritation.
Inhalation	Inhalation of dust in high concentration may cause irritation of respiratory system.
Ingestion	Low order of toxicity based on components.

Chronic toxicity

Sensitization	No information available.
Neurological effects	None known.
Carcinogenicity	Contains no ingredient listed as a carcinogen.
Mutagenicity	This product is not recognized as mutagenic by Research Agencies

12. ECOLOGICAL INFORMATION**12.1. Toxicity****Ecotoxicity effects**

The environmental impact of this product has not been fully investigated. 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		

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)
Lecithin 8002-43-5	X	X	X	-	X	X	X	X	X
Iron 7439-89-6	X	X	X	-	X	X	X	X	X
Organic amendment	-	X	X	-	X	-	X	X	X

15.2. Chemical Safety Report

Not Applicable.

16. OTHER INFORMATION

Issuing Date: 2015-07-14

Restrictions on Use:

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 (M)SDS sections updated: 2.

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Prepared By:

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End of Safety Data Sheet
