SAFETY DATA SHEET
GeoForm™ Extended Release

SDS # : GEOS
Revision date: 2018-04-18
Format: NA
Version 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name GeoForm™ Extended Release

Recommended use of the chemical and restrictions on use

Recommended Use: Remediation of contaminated soil and groundwater

Restrictions on Use Use as recommended by the label.

Manufacturer/Supplier

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

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) and the 2015 Workplace Hazardous Materials Information System (WHMIS)

Combustible dust

GHS Label elements, including precautionary statements

EMERGENCY OVERVIEW

Warning

Hazard Statements
May form combustible dust concentrations in air

Precautionary Statements - Prevention

Keep away from all ignition sources including heat,sparks and flame.
Keep container closed and grounded.
Prevent dust accumulations to minimize explosion hazard.

Hazards not otherwise classified (HNOC)
No hazards not otherwise classified were identified.

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS-No	Weight %
iron salt	Proprietary	15 - 20
Iron	7439-89-6	40 - 50
Trade secret	Proprietary	< 3
Organic amendment	Proprietary	20 - 30%

4. FIRST AID MEASURES

Eye Contact — Rinse thoroughly with plenty of water, also under the eyelids. If irritation persists, call a physician.

Skin Contact — Wash off with warm water and soap. In the case of skin irritation or allergic reactions see a physician.

Inhalation — Remove person to fresh air. If breathing is difficult or if discomfort occurs and persists, obtain medical attention.

Ingestion — Clean mouth with water and afterwards drink plenty of water. Get medical attention if symptoms occur.

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

Indication of immediate medical attention and special treatment needed, if necessary — Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Carbon dioxide (CO_2). Dry chemical. Water spray. Foam.

Specific Hazards Arising from the Chemical Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Flammable properties Not combustible

Hazardous Combustion Products Oxides of sulfur. Carbon monoxide.

Explosion data
Sensitivity to Mechanical Impact Not sensitive.
Sensitivity to Static Discharge Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Avoid dust formation. Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Avoid contact with eyes. Use personal protective equipment. For personal protection see Section 8.

Other For further clean-up instructions, call PeroxyChem Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

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

Methods for Containment Maintain good housekeeping practices to avoid accumulation of settled dust, especially on overhead surfaces. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry.

Methods for cleaning up Pick up and transfer to properly labeled containers. Take precautionary measures against static discharges. 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. The waste may be recovered and recycled.

7. HANDLING AND STORAGE

Handling Avoid contact with eyes. Avoid breathing dust. Wear personal protective equipment. Refer to Section 8. Minimize dust generation and accumulation. Keep away from open flames, hot surfaces and sources of ignition. 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.

Storage Store in a well-ventilated place. Keep cool. Keep away from open flames, hot surfaces and sources of ignition. Any vessel that contains wet product must be vented due to potential pressure build up from gases.

Incompatible products Oxidizing agents Strong acids Strong bases Oxidizing agents. Strong acids. Strong bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

Chemical name	ACGIH TLV	OSHA PEL	NIOSH	Mexico
iron salt	TWA: 1 mg/m^3	-	-	-

salt	TWA: 10 mg/m³	-	-	-

Chemical name	British Columbia	Quebec	Ontario TWAEV	Alberta
iron salt	TWA: 1 mg/m³	TWA: 1.0 mg/m³	TWA: 1 mg/m³	TWA: 1 mg/m³
salt	-	-	TWA: 10 mg/m³ inhalable	-

Appropriate engineering controls

Engineering measures Provide appropriate exhaust ventilation at places where dust is formed. Use grounding and bonding of dry handling equipment for pneumatics or free falling powder during processing in enclosed systems. Use only appropriately classified electrical equipment and powered industrial trucks. and.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Whenever airborn dust concentrations are high, appropriate protective eyewear, such as mono-goggles, should be worn to prevent eye contact.

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

Hand Protection Protective gloves

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 Clean water should be available for washing in case of eye or skin contamination. Remove and wash contaminated clothing before re-use. Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Brown Powder
Physical State	Solid
Color	Brown
Odor	No information available
Odor threshold	No information available
pH	6 - 8
Melting point/freezing point	No information available
Boiling Point/Range	No information available
Flash point	No information available
Evaporation Rate	No information available
Flammability (solid, gas)	Combustible material
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor pressure	No information available
Vapor density	No information available
Density	No information available
Specific gravity	No information available
Water solubility	Insoluble in water
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Viscosity, kinematic	Not applicable (Solid)

Viscosity, dynamic	Not applicable
Explosive properties	Low level dust explosion hazard
Oxidizing properties	Not applicable
Molecular weight	No information available
Bulk density	0.92 g/cm³ (loose) / 1.13 g/cm³ (tapped)

10. STABILITY AND REACTIVITY

Reactivity None under normal use conditions.

Chemical Stability Stable under recommended storage conditions.

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. Product may form by-products during processing which can be toxic or potentially explosive such as hydrogen, hydrogen sulfide and carbon monoxide.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid Heat, flames and sparks.

Incompatible materials Oxidizing agents. Strong acids. Strong bases.

Hazardous Decomposition Products Thermal decomposition can lead to release of irritating and toxic gases and vapors: Hydrogen sulfide Hydrogen gas, Sulfur oxides, Carbon oxides (COx),

11. TOXICOLOGICAL INFORMATION

Product Information

Product does not present an acute toxicity hazard based on known information.

Serious eye damage/eye irritation Product dust may cause mechanical eye irritation.
Skin corrosion/irritation Minimally irritating.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation	NOAEL Oral Value
Iron (7439-89-6)	98600 mg/kg (Rat)			
Trade secret ()	= 5680 mg/kg (Rat)		> 22 mg/L (Rat) 1 h	
Trade secret ()	= 8500 mg/kg (Rat)			
Viscosity modifier ()	6770 mg/kg (Rat)			

Information on toxicological effects

Symptoms No information available.

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

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Trade secret		Group 3		

IARC (International Agency for Research on Cancer) *Group 3 - Not classifiable as to its carcinogenicity to humans*

Mutagenicity No known mutagenic or teratogenic effects.

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 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

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		
Trade secret		96 h LC50: 220 - 460 mg/L (Leuciscus idus) static		24 h LC50: = 330 mg/L (Psammechinus miliaris)

Persistence and degradability The organic components are biodegradable and can be expected to contribute to BOD. Biodegradability does not pertain to inorganic substances.

Bioaccumulation Bioaccumulation is unlikely.

Mobility No information available.

Other Adverse Effects None known.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Recovery/recycling recommended.

Contaminated Packaging Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

DOT NOT REGULATED

TDG 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
salt					X
Trade secret			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/ELINCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)	NZIoC (New Zealand)
iron salt (15 - 20)								X	X
Iron 7439-89-6 (40 - 50)	X	X	X		X	X	X	X	X
Trade secret (< 3)	X	X	X	X	X	X	X	X	X
Organic amendment (NF)		X	X		X		X	X	X
salt (NF)					X		X	X	X
Trade secret	X	X	X	X	X	X	X	X	X

(NF)									

Mexico

Mexico - Grade Minimum risk, Grade 0

16. OTHER INFORMATION

NFPA	**Health Hazards** 1	**Flammability** 1	**Stability** 0	**Special Hazards** -
HMIS	**Health Hazards** 1	**Flammability** 1	**Physical hazard** 0	**Special precautions** -

Revision date: 2018-04-18
Revision note No information available

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Prepared By:

PeroxyChem

End of Safety Data Sheet