

SAFETY DATA SHEET
TersOx™ Microbe PH



Creation Date: 4/20/2020
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Version 1.2
SDS # 22A

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identifier

Product Name: TersOx™ Microbe PH

Synonyms: Non-pathogenic, naturally occurring microorganisms absorbed on wheat bran and corn gluten, Hydrocarbon Degrading Bioformula

Product Form: Mixture

1.2 Recommended Use of the Chemical and Restrictions on Use

Recommended Use: Remediation of contaminated groundwater and soils

Restrictions on Use: Use as recommended by the label

1.3 Details of the Supplier

Supplier Tersus Environmental, LLC
 1116 Colonial Club Rd
 Wake Forest, NC 27587
 Phone: +1-919-453-5577
 Email: info@tersusenv.com

1.4 Emergency Telephone Number

For leak, fire, spill or accident emergencies, call:

+1-919-453-5577 (Tersus Office Hours, 8:00 AM to 5:00 PM Eastern)
+1-800-424-9300 (Chemtrec 24 Hour Service – Emergency Only)

2. HAZARD IDENTIFICATION

2.1 Relevant Identified Uses of the Substance or Mixture

| Hazard Classification | Category | H-statement |
|-----------------------------|---------------------------|-------------|
| Acute toxicity, Inhalation | Not Classified | |
| Acute toxicity, Oral | Not Classified | |
| Acute toxicity, Dermal | Not Classified | |
| Skin irritant, (category 2) | May cause skin irritation | H315 |
| Eye irritant (category 2A) | Causes eye irritation | H319 |
| Mutagenicity | Unknown | |
| Carcinogenicity | Unknown | |
| Reproductive toxicity | Unknown | |

2.2 Label Elements**2.2.1 Hazard Pictograms****2.3 Signal Word** Warning!**2.4 Hazard Statements** Causes skin irritation (H315)
Causes serious eye irritation (H319)**2.5 Precautionary Statements**

P264 – Wash thoroughly after handling.
 P280 – Wear protective gloves, clothing, eye, and face protection.
 P302 + P352 – IF ON SKIN: Wash with soap and plenty of water.
 P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P332 + P313 – If skin irritation occurs: Get medical advice/attention.
 P337 + P313 – If eye irritation occurs: Get medical advice/attention.
 P362 + P364 – Take off contaminated clothing and wash it before reuse.

2.6 Further Information Crystalline silica is a known cause of silicosis (a non-cancerous lung disease). Prolonged and/or repeated inhalation must be avoided. Persons who have a compromised immune system or a history of severe allergic response should avoid contact and/or breathing dust or mist from product handling or manufacturing processes.

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| 3. COMPOSITION/INFORMATION ON INGREDIENTS |
|--|

3.1 Chemical Identity

3.1.1 Synonyms Non-pathogenic, naturally occurring microorganisms absorbed on wheat bran and corn gluten.

3.2 Hazardous Components

| Chemical Name | Concentration (%) | CAS Number |
|----------------------|-------------------|------------|
| Dolomite | <80% | 16389-88-1 |
| Crystalline Silica | <0.1% | 14808-60-7 |
| Urea | 1-3% | 57-13-6 |
| Diammonium Phosphate | <1% | 7783-28-0 |

3.3 Non-Hazardous Components

| Chemical Name | Concentration (%) | CAS Number |
|--------------------|-------------------|-------------|
| Wheat Bran | * | 116469-86-4 |
| Corn gluten | * | 66071-96-3 |
| Diatomaceous Earth | * | 91053-39-3 |

4. FIRST AID MEASURES

4.1 General Information

Remove affected person from source of contamination. Check the vital functions. If unconscious place in recovery position and seek medical advice. In case of respiratory arrest, administer artificial respiration. Cardiac arrest: perform resuscitation. Victim conscious with labored breathing: have them sit down. Victim in shock: put them on their back with legs slightly raised. Vomiting: to prevent asphyxia pneumonia. Prevent cooling by covering the victim (keep them warm). Keep watching the victim. Give psychological aid. Keep the victim calm, and avoid physical strain.

4.2 Eye Contact

In case of contact with eyes, flush eyes with low pressure water for at least 15 minutes. Take victim to a doctor if irritation persists.

4.3 Skin Contact

Wash skin with soap and water. Remove contaminated clothing and wash.

4.4 Inhalation

May cause sensitization by inhalation in hypersensitive individuals. Avoid product handling which results in dust generation. If inhaled, remove from contaminated area to fresh air. Report situation. Seek medical attention if allergic response exhibited.

4.5 Ingestion

If swallowed, rinse mouth and throat with tap water. Drink water.

4.6 Most Important Effects (Acute and Delayed)

N/A

4.7 Indication of Need for Immediate Medical Attention

If exposed and concerned, get immediate medical attention.

5. FIRE-FIGHTING MEASURES

5.1 Suitable Extinguishing Media

Dry chemical, carbon dioxide, chemical foam, or water fog.

5.2 Specific Hazards Arising from the Chemical or Mixture

No special requirements. Organic dusts are a weak explosion hazard. Not hazardous under normal storage and use conditions.

5.3 Special Fire Fighting Procedures

Cool containers exposed to flames with water until well after the fire is out. Use water spray to reduce vapors. If risk of water pollution occurs, notify appropriate authorities. Avoid water in straight hose stream; will scatter and spread fire. Keep upwind. Do not inhale explosion and combustion gases. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Cool containers exposed to flames with water until well after the fire is out. Use water spray to reduce vapors. If risk of water pollution occurs, notify appropriate authorities. Avoid water in straight hose stream; will scatter and spread fire. Wear positive-pressure, self-contained breathing apparatus (SCBA) and chemical protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions

Provide enough ventilation. Advice for emergency responders: protective equipment see Section 8. Wear protective clothing as described in Section 8 of this safety data sheet.

6.2 First Aid

In case of contact with skin, wash with soap and water. If symptoms occur, seek medical attention. In case of contact with eyes, rinse with plenty of water for at least 15 minutes and see an eye specialist if irritation persists. In case of inhalation, remove to fresh air. In case of ingestion, drink water. If symptoms occur, seek medical assistance.

6.3 Environmental Precautions

N/A

6.4 Methods for Containment / Clean Up

Spilled product should be removed immediately to avoid formation of dust. Contain spill, sweep up avoiding airborne dust. Provide sufficient ventilation.

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Avoid creating dust. Adequately ventilate when handling this product. Provide eyewash station. No special requirements. Contain with applicable regulations. Avoid contact with eyes. Avoid inhalation of vapors and spray/mist. Remove contaminated clothing immediately. Clean contaminated objects and areas thoroughly observing environmental regulations. Keep away from sources of ignition – No smoking. Handle in accordance with good industrial hygiene and safety procedures. Discharge into the environment must be avoided. Keep container tightly closed. Either local exhaust or general room ventilation is usually required.

7.2 Hygiene Measures

Handle in accordance with good industrial hygiene and safety procedures. Use good personal hygiene practices.

7.3 Conditions for Safe Storage (Includes Incompatibilities)

N/A. Organic dusts are a weak explosive hazard. Not hazardous under normal storage and use condition.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Control Parameters

8.1.1 Exposure Guidelines Data

| Name | % by weight | TLV (ACGIH) | PEL (OSHA) |
|----------------------|-------------|---------------------------------|---------------------------|
| Dolomite | < 80 | 10 mg/m ³ | 5 mg/m ³ |
| Urea | <1 – 3 | 10 mg/m ³ {3}* | 15 mg/m ³ {5}* |
| Diammonium Phosphate | < 1 | 10 mg/m ³ {3}* | 15 mg/m ³ {5}* |
| Crystalline silica | < 0.1 | 0.1 mg/m ³ | 0.1 mg/m ³ |
| Wheat bran | | 10 mg/m ³ (nuisance) | |

| Name | % by weight | TLV (ACGIH) | PEL (OSHA) |
|-----------------------------|-------------|--------------------------------------|------------|
| | | dust) | |
| Corn gluten | | 10 mg/m ³ (nuisance dust) | |
| Ground and dehydrated algae | | 10 mg/m ³ (nuisance dust) | |

8.2 Exposure Control

8.2.1 Protective Equipment



8.3 Appropriate Engineering Controls

Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients. Do not allow uncontrolled discharge of product into the environment.

8.3.1 Eye/Face Protection

The following protection should be worn: Safety glasses with shields, chemical splash goggles or face shield.

8.3.2 Respiratory Protection

Dust mask or respirator for particle removal (NIOSH)

8.3.3 Hand Protection

Neoprene. Vinyl, Rubber (natural, latex), Butyl rubber. Wear protective gloves made of the following material: Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.

8.3.4 Skin Protection

Wear appropriate clothing to prevent any possibility of skin contact. Use rubber or vinyl gloves

8.4 Hygiene Measures

Avoid dusty conditions. Wash promptly if skin becomes contaminated. Wash hands at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. If food surfaces are exposed, wash with germicidal detergent or chlorine bleach. Remove and wash contaminated clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties

| | |
|---|----------------------|
| Appearance | Tan granular powder |
| Odor | Mild odor |
| Odor threshold | Unknown |
| pH | 6 – 9; 1% suspension |
| Melting point /Freezing Point | Unknown |
| Initial Boiling point and boiling point range | Does Not Apply |
| Flash Point | Does Not Apply |
| Evaporation rate | Does Not Apply |
| Flammability (solid; gas) | Unknown |
| Upper/lower flammability or explosive | Does Not Apply |

| | |
|--|----------------|
| limits | |
| Vapor pressure | Does Not Apply |
| Vapor density | Does Not Apply |
| Relative density | Unknown |
| Solubility (ies) | <5% |
| Partition coefficient: n-octanol/water | Does Not Apply |
| Auto-ignition temperature | Unknown |
| Decomposition temperature | Unknown |
| Viscosity | Does Not Apply |

10. STABILITY AND REACTIVITY

| | |
|---|---|
| <u>10.1 Reactivity</u> | Stable under normal conditions and use. |
| <u>10.2 Chemical Stability</u> | Unknown |
| <u>10.3 Possibility of Hazardous Reactions</u> | Unknown |
| <u>10.4 Conditions to Avoid</u> | Freezing or temperatures above 100°F (40°C) |
| <u>10.5 Incompatible Materials</u> | Strong acids, bases, or oxidizers |
| <u>10.6 Hazardous Decomposition Products</u> | Unknown |

11. TOXICOLOGICAL INFORMATION

11.1 Acute Toxicity

| | |
|---|---|
| Acute toxicity | Enzymes in this product are non-toxic (LD 50 >2 g/kg in rats). Inhalation of dust may cause respiratory allergy in susceptible individuals. |
| Skin Corrosion/Irritation | Mild |
| Eye Irritation | Mild |
| Respiratory or Skin Sensitization | Dust may cause irritation or allergy in susceptible individuals. May cause respiratory allergy in susceptible individuals: sensitization (shortness of breath, wheezing, and labored coughing) take individual to emergency room. |
| Ingestion | May cause severe gastric disturbances, sore throat. |
| Germ Cell Mutagenicity | Information Not Available |
| Carcinogenicity | Crystalline silica probably carcinogenic NTP: No IARC Monographs: No OSHA Regulated: No |
| Reproductive Toxicity | Information Not Available |
| Specific Target Organ Toxicity (Single Exposure | Information Not Available |
| Specific Organ Toxicity, and Repeated Exposure) | Information Not Available |
| Aspiration Hazard | Information Not Available |
| General Remarks | Product may contain <1% crystalline silica (CS) Crystalline silica probably carcinogenic. IARC has classified CS as probably |

carcinogenic for humans (2A). NTP lists CS as a substance which may reasonably be anticipated to be a carcinogen. CS is a known cause of silicosis (a non-cancerous lung disease).

12. ECOLOGICAL INFORMATION

12.1 Chemical Fate Information

Product is readily biodegradable in wastewater treatment systems.

12.2 Persistence and degradability

Readily biodegradable.

12.4 Bioaccumulative potential

Unknown

12.5 Mobility in Soil

Unknown

13. DISPOSAL CONSIDERATIONS

13.1 Waste Disposal Methods

Dispose according to federal, state, and local laws. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Authority. Waste is suitable for incineration.

14. TRANSPORTATION INFORMATION

14.1 UN Number

Mixture not classified as Hazardous according to Regulation (EC) 1272/2008.

14.2 UN Proper Shipping Name

N/A

14.3 Transport Hazard Class

N/A

14.4 Packing Group

N/A

14.5 Environmental Hazards

N/A

14.6 Special Precautions for User

N/A

14.7 Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

N/A

14.8 DOT Proper Shipping Name

Chemicals not otherwise indexed (NOI) non-hazardous.

15. REGULATORY INFORMATION

15.1 EU Directive 2000_54 Regarding Risks from Biological Agents

Micro-organisms in Class 1 may be used without restriction.

15.2 WGK (Water Hazards Class)

0 non-hazardous to water.

15.3 All Ingredients Are Listed on the USEPA TSCA Inventory List

15.4 Canadian WHMIS

Toxic Class D2B (eye irritant)

16. OTHER INFORMATION

Components not precisely identified are proprietary or non-hazardous. All chemical ingredients appear on the EPA TSCA inventory.

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919.453.5577 • info@tersusenv.com • tersusenv.com

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End of Safety Data Sheet