

## Perma-Zyme® Safety Data Sheet

### Section 1 - Identification

**Product Name** Perma-Zyme®

**PERMA-ZYME**

**Manufacturer** Substrata LLC  
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#### Intended Uses

Perma-Zyme is intended to be used to stabilize and harden soil, and to abate dust for applications such as, but not limited to, road construction and pond lining.

### Section 2 – Hazards Identification

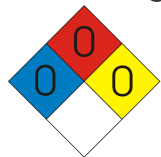
#### Classification of Substance/Mixture

This product is not classified according the Globally Harmonized System (GHS).

#### Hazard Statements and Symbols

None needed.

#### NFPA Rating



Health = 0  
Fire = 0  
Reactivity = 0

#### U.S. Hazardous Materials Identification System (HMIS) Rating

Health	0	No significant risk
Flammability	0	Material is nonflammable and will not burn
Physical Hazard	0	Material is stable, non-reactive and non-explosive
Personal Protection	-	No special hazard when used normally

## Section 2 – Hazards Identification (Continued)

### Hazards Not Otherwise Classified

None

## Section 3 – Composition/Information on Ingredients

### Chemical Characterization

Mixture

Chemical Name	Concentration	CAS Number
Proprietary mixture	70%	Proprietary
Water	30%	7732-18-5

## Section 4 – First Aid Measures

### Inhalation

Not expected to cause respiratory irritation. If adverse symptoms develop move victim away from source of exposure and into a well-ventilated area or an area with fresh air. If symptoms persist, seek medical attention.

### Skin Contact

Not expected to cause skin irritation. In event of skin contact, remove contaminated clothing and wash affected area with water and mild soap. If irritation develops or persists, seek medical attention.

### Eye Contact

If irritation or redness occurs from exposure, flush eyes with clean water for several minutes. Remove contact lenses, if present and easily removable. If irritation continues to develop, seek medical attention.

### Ingestion

If swallowed, nausea or upset stomach may occur. Do not induce vomiting. Drink plenty of water to dilute. If symptoms persist, seek medical attention.

## Section 5 – Fire-Fighting Measures

### Flammability

Nonflammable and noncombustible

This material is a water-based mixture that will not burn.

### Flash Point

Nonflammable

## Section 5 – Fire-Fighting Measures (Continued)

### Extinguishing Media

Use dry chemical, CO<sub>2</sub>, or water spray.

### Special Protective Actions for Fire-Fighters

Wear full protective clothing including positive pressure breathing apparatus.

## Section 6 – Accidental Release Measures

### Method for Clean Up

Avoid spills and clean up immediately. Prevent product from spreading by using sand, earth, clay, or containment material to absorb spilled material. Slippery when spilled. Dispose of material properly. See Section 13 for disposal considerations.

### Protective Measures

Avoid contact with skin and eyes. Use appropriate personal protective equipment. Use appropriate measures to prevent the spill from spreading or entering drains, sewer system, rivers or open bodies of water.

## Section 7 – Handling and Storage

### Safe Handling

Always wear personal protective equipment. When working with drums or totes wear safety footwear. Avoid prolonged or repeated contact with skin.

### Storage

Store material in tightly closed container in a dry well-ventilated place. Maintain proper storage temperatures of 40°F - 120°F, optimum storage temperature is 75°F. Store containers upright to avoid any leakage.

## Section 8 – Exposure Controls / Personal Protection

### Occupational Exposure Limits

Contains no substances or ingredients with known occupation exposure limit values.

### Appropriate Engineering Controls

Good ventilation should be used. Appropriate eyewash stations should be provided.

### Individual Protection Measures / Personal Protective Equipment

General hygiene consideration should be taken including washing hands after handling and before eating and drinking.

## Section 8 – Exposure Controls / Personal Protection (Continued)

Eye Protection	Eye protection is NOT generally required under normal usage. If material is handled in a manner that could be splashed it is recommended that splash-proof safety glasses or a full-face shield is used.
Respiratory Protection	When used in well ventilated areas respiratory protection is NOT required.
Skin Protection	Use protective gloves and clothing when used for prolonged periods or when user is dermally sensitive. For prolonged or repeated exposures, use chemical resistant boots, gloves, and apron of body parts subjected to exposure.

## Section 9 – Physical and Chemical Properties

<b>Appearance:</b>	Amber Brown	<b>Boiling Point:</b>	90° C (194° F)
<b>Physical Form:</b>	Thick liquid	<b>Vapor Pressure:</b>	21.84 mmHg
<b>Odor:</b>	Mild and sweet	<b>Vapor Density:</b>	1.4
<b>Odor Threshold:</b>	Not determined	<b>Relative Density:</b>	8.8 lb/gal
<b>pH:</b>	4 - 5.5	<b>Solubility:</b>	Infinitely Soluble
<b>Freezing Point:</b>	0° C (32° F)	<b>Viscosity:</b>	70 cSt

## Section 10 – Stability and Reactivity

### Reactivity

None

### Chemical Stability

Stable under normal conditions. Stable at 70° F ≥ 36 months.

### Conditions to Avoid

Extreme heat or cold

### Incompatible Materials

Do not mix with anything other than water.

### Hazardous Decomposition

Hazardous decomposition products are not expected to form throughout normal usage.

## Section 11 – Toxicological Information

### Likely Routes of Exposure

Inhalation	Not expected to cause any irritation
Skin Contact	Mild skin irritation with prolonged contact
Eye Contact	Causes mild eye irritation
Ingestion	May cause upset stomach

### Acute Toxicity

Oral LD <sub>50</sub>	>5 g/kg
Dermal LD <sub>50</sub>	No data available.
Inhalation LD <sub>50</sub>	No data available.

### Carcinogenicity

Contains no component that is known to be carcinogenic

## Section 12 – Ecological Information

### Ecotoxicity

Ingredients used do not trigger toxicity classifications under the Globally Harmonized System of Classification and Labeling of Chemicals.

### Aquatic

No data available

### Terrestrial

No data available

### Persistence and Degradability

Readily biodegradable

### Bioaccumulative Potential

No data available

### Mobility in Soil

Highly mobile in soil

## Section 13 – Disposal Considerations

### Material Disposal

Recover or recycle if possible. Do NOT dispose into drains, bodies of water, or environment. Solidify product and dispose in approved landfill. Check with local, regional, and/or national regulations for appropriate methods of disposal.

## Section 13 – Disposal Considerations (Continued)

### Container Disposal

Containers may be offered for recycling

## Section 14 – Transport Information

### U.N. Number

Not applicable

### U.N. Proper Shipping Name

Enzyme Preparations

### Transport Hazard Classes

Not applicable

### Environmental Hazards

None

### Transport in Bulk (according to Annex II of MARPOL 73/78 and IBC Code)

Unknown

### Special precautions for users to be aware of/comply with, in connection with transport or conveyance either within or outside their premises:

None known

U.S. DOT / Canadian TDG	Not regulated for shipping
IMO/ IDMG	Not classified as Hazardous
ICAO/ IATA	Not classified as Hazardous
ADR/ RID	Not classified as Hazardous

## Section 15 – Regulatory Information

### TSCA Inventory

Yes, all ingredients listed

### OSHA Hazard

Not regulated

**SDS Version**

1.01

**Revision Date**

July 16, 2019

The information contained in this document was carefully compiled and is believed to be accurate. The information represents the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. However, it does not represent any guarantee of the properties of the product. Substrata shall not be held liable for any damages resulting from handling or from contact with the above product. It is the responsibility of the purchaser to determine the suitability of the product for their particular purposes.

Call Substrata for product information or order placement, 702.825.5200