

Trade Name: Chitosan Clarifier Plus Enzyme

### Section 1: Identification

**Product/Chemical Name:** Chitosan Clarifier Plus Enzyme

**Chemical Formula:** Chitosan Acetate Solution and Enzyme blend

**CAS Number:** N/A.

**Other Designations:** None

**General Use:** Flocculates contaminants from water.

- **Manufacturer:**

Pure Planet Science & Technologies Inc. dba Orenda Technologies  
760 River Oaks Circle  
Fairview, TX 75069  
Tele: 866-763- 4269  
[info@orendatech.com](mailto:info@orendatech.com)  
[www.orendatech.com](http://www.orendatech.com)

- **Produced For:**

Lee Joseph Inc.  
864 South Wells Ave.  
Reno, NV 89502  
<http://www.leejosephpools.com/>

### Section 2: Hazard(s) Identification

# Safety Data Sheet (SDS)

Reviewed on 02/22/2017

Trade Name: Chitosan Clarifier Plus Enzyme

## Hazardous Statement:

- Pale yellow viscous liquid with a pungent vinegar odor. May be mildly irritating to eyes. Not likely to be hazardous to skin, respiratory tract, or by ingestion.

## Precautionary statements:

**EYE:** May be mildly irritating to eyes.

**SKIN:** Not hazardous to skin.

**INHALATION:** Not likely to be hazardous by inhalation.

**INGESTION:** Not likely to be hazardous by ingestion.

**CHRONIC EXPOSURE/CARCINOGENICITY:** None of the components present in this material at concentrations of equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

**SIGNS AND SYMPTOMS OF OVEREXPOSURE:** Eye irritation.

**AGGRAVATION OF PRE-EXISTING CONDITIONS:** None known.

**POTENTIAL ENVIRONMENTAL EFFECTS:** Material is 100% biodegradable and nontoxic.

### · Classification system:

### · NFPA ratings (scale 0 - 4)



Health = 1  
Fire = 0  
Reactivity = 0

### · HMIS-ratings (scale 0 - 4)



Health = 1  
Fire = 0  
Reactivity = 0

## Section 3: Composition/Information on Ingredients

CAS NO.	COMPONENT	%	OSHA HAZARDOUS?
Trade Secret	Trade Secret	4	NO
	<i>All other components are non-hazardous.</i>	96	NO

## Section 4: First-Aid Measures

### FIRST AID PROCEDURES

**EYE CONTACT:** Remove contact lenses (if applicable), flush with water for 15 minutes. Call a physician.

**SKIN CONTACT:** Cleansing the skin after exposure is advisable.

**INHALATION:** If large amounts of fumes are inhaled, remove to fresh air and consult a physician.

**INGESTION:** Consult a physician if necessary.

**NOTE TO PHYSICIANS:** None

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### Section 5: Fire-Fighting Measures

**FLASH POINT:** Not available

**UPPER FLAMMABLE LIMIT:** Not available

**FLAMMABILITY CLASS (OSHA):** Not applicable

**AUTOIGNITION TEMPERATURE:** Not available

**LOWER FLAMMABLE LIMIT:** Not available

**FLAME PROPAGATION/BURNING RATE:** Not available

**UNIQUE FIRE PROPERTIES:** None known.

**HAZARDOUS COMBUSTION PRODUCTS:** None.

**EXTINGUISHING MEDIA:** Does not burn. Use water, dry chemicals, carbon dioxide, sand or foam. Use extinguishing media appropriate for surrounding fire.

**PROTECTION OF FIREFIGHTERS:** Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coat, gloves and rubber boots), including a positive pressure NIOSH approved self-contained breathing apparatus. Water may be used to keep fire-exposed containers cool until fire is out.

### Section 6: Accidental Release Measures

**PERSONAL PROTECTIVE EQUIPMENT:** See Section 8 (Personal Protective Equipment).

**ENVIRONMENTAL PRECAUTIONS:** Material is 100% biodegradable and nontoxic.

**METHODS FOR CLEANING UP:** Dilute with water and hose down.

### Section 7: Handling and Storage

**VENTILATION:** General ventilation should be sufficient under normal conditions.

**FIRE PREVENTION:** Non-flammable, no special fire protection required.

**SPECIAL HANDLING REQUIREMENTS:** Avoid eye contact.

#### **SAFE STORAGE RECOMMENDATIONS**

**CONTAINMENT:** The container should be kept covered to prevent contamination.

**STORAGE ROOM RECOMMENDATIONS:** Store in a cool, dry, well-ventilated area away from direct heat.

**INCOMPATIBLE MATERIALS:** Strong oxidizing material and strong bases.

**STORAGE CONDITIONS:** 10-50°C (will freeze @ ~3°C). Indefinite Shelf Life; Viscosity will decrease over time.

### Section 8: Exposure Controls/Personal Protection

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**ENGINEERING CONTROLS:** General ventilation should be sufficient under normal conditions.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

**EYE/FACE PROTECTION:** Safety glasses recommended.

**SKIN PROTECTION:** For operations where skin contact can occur, wear impervious clothing such as apron, boots, or whole bodysuit.

**HAND PROTECTION:** For operations where hand contact can occur, rubber gloves recommended.

**RESPIRATORY PROTECTION:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. *Respirator use is not required for this product.*

**GOOD HYGIENE/WORK PRACTICES:** Always follow good hygiene/work practices by avoiding vapors or mists and contact with eyes and skin. Thoroughly wash hands after handling and before eating or drinking. Always wear the appropriate PPE when repairing or performing maintenance on contaminated equipment.

### EXPOSURE GUIDELINES

#### PERMISSIBLE EXPOSURE LIMITS

INGREDIENT CAS NO.	OSHA		WISHA		ACGIH (TLV)	
	TWA	STEL	TWA	STEL	TWA	STEL
Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

## Section 9: Physical and Chemical Properties

**COLOR:** Pale yellow to light amber

**SHAPE:** Liquid

**PHYSICAL FORM:** Liquid

**ODOR:** Pungent vinegar odor

**pH:** 3.0 - 4.5

**VAPOR PRESSURE:** Not available

**VAPOR DENSITY:** Not available

**BOILING POINT:** Not available

**MELTING POINT:** Not available

**FREEZING POINT:** Not available

**SOLUBILITY IN WATER:** None

**SPECIFIC GRAVITY OR DENSITY:** Not determined

*NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Values should not be construed as a guaranteed analysis of any specific lot or as specifications.*

## Section 10: Stability and Reactivity

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CHEMICAL STABILITY: Stable.

CONDITIONS TO AVOID: Freezing temperatures or excess heat (for quality purposes).

MATERIALS TO AVOID (INCOMPATIBILITY): Strong oxidizing material and strong bases.

HAZARDOUS DECOMPOSITION PRODUCTS: Decomposition will not occur.

HAZARDOUS POLYMERIZATION: Will not occur.

### Section 11: Toxicological Information

**ORAL LD<sub>50</sub> (rat):** Not available.

**DERMAL LD<sub>50</sub> (rabbit):** Not available.

**SKIN IRRITATION:** Not available.

**EYE IRRITATION:** Not available.

**SKIN SENSITIZATION:** Not available.

**ADDITIONAL INFORMATION:** None

### Section 12: Ecological Information (non-mandatory)

#### ECOTOXICITY (in water):

##### Acute:

- Daphnia LC 50 – 1369 mg/L
- Daphnia NOEC – 1000 mg/L
- Fathead minnows LC 50 – 642 mg/L
- Fathead minnows NOEC – 500 mg/L
- Rainbow Trout LC 50 – 173mg/L
- Rainbow Trout NOEC – 125 mg/L

##### Chronic:

- Rainbow Trout LC 50 – 154 mg /L
- Rainbow Trout LC 25 – 121 mg/L
- Fathead Minnow LC 50 - > 100mg/L
- Fathead Minnow LC25 – 932 mg/L

**MOBILITY:** Not available.

**PERSISTENCE AND DEGRADABILITY:** Not available.

**BIOACCUMULATIVE POTENTIAL:** Not available.

**ADDITIONAL INFORMATION:** Not available.

### Section 13: Disposal Considerations (non-mandatory)

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If this product as supplied becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal regulations. Consult state and local regulations regarding the proper disposal of this material.

*NOTE: Chemical additions, processing or otherwise altering this material may make the waste management information presented in this SDS incomplete, inaccurate or otherwise inappropriate.*

### Section 14: Transport Information (non-mandatory)

**U.S. DEPARTMENT OF TRANSPORTATION (DOT):**

**Proper Shipping Name:** Not Regulated

**Hazard Class:** Not Regulated

**Identification Number (UN Number):** Not Regulated

**Packing Group (PG):** Not Regulated

### Section 15: Regulatory Information (non-mandatory)

**TSCA STATUS:** The substances in this preparation are included on or exempted from the TSCA 8(b) inventory (40 CFR 710).

**CERCLA REPORTABLE QUANTITY (RQ):**

CHEMICAL NAME	RQ
Not applicable	Not applicable

**SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (EHS):**

CHEMICAL NAME	TPQ	RQ
Not applicable	Not applicable	Not applicable

**SARA TITLE III SECTION 311/312 HAZARD CATEGORIES:** Does this product/material meet the definition of the following hazard classes according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of SARA Title III?

ACUTE HEALTH HAZARD	CHRONIC HEALTH HAZARD	FIRE HAZARD	REACTIVE HAZARD	SUDDEN RELEASE OF PRESSURE



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NO	NO	NO	NO	NO
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**SARA TITLE III SECTION 313 TOXIC CHEMICALS INFORMATION:**

CHEMICAL NAME	CAS NO.	CONCENTRATION (%)
Not applicable	Not applicable	Not applicable

**CALIFORNIA PROPOSITION 65:**  
reproductive toxicity:

Chemical(s) is/are known to the state  
as a carcinogen, a reproductive toxicant,  
or a developmental toxicant.

CHEMICAL NAME	CAS NO.	CONCENTRATION (%)
Not applicable	Not applicable	Not applicable

Section 16: Other Information

Prepared by: Jarred Morgan  
Preparation date: 02/22/2017  
**Additional Hazard Rating Systems:None.**

**Disclaimer:** The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.