

# Material Safety Data Sheet

**ClearaZyme™ Pool Water Cleaner & Clarifiers**

**MSDS No. CZ**

Date of Preparation: July 2003

Revision: 0

## Section 1 - Chemical Product and Company Identification

**Product/Chemical Name:** ClearaZyme™, ClearaZyme2™, and ClearaZyme4™ Pool Water Cleaner & Clarifiers

**Chemical Formula:** Proprietary.

**CAS Number:** N/A

**Other Designations:** Liquid mixed enzymes and natural polysaccharide polymers.

**General Use:** Catalytic bio-oxidation of organic contaminants in, and clarification of, aqueous systems.

**Manufacturer:** Effective Pool Solutions, Inc., 505 East Cedar Street, Olathe, KS 66061. Tel: (877) 397-7007, Fax: (866) 397-7008 (emergency/informational telephone/fax numbers).

## Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number	% wt or % vol
The precise composition of ClearaZyme™ Pool Water Cleaner & Clarifiers is proprietary information. A more complete disclosure will be made to an attending physician in the event of a medical emergency involving this product. When utilized in accordance with Effective Pool Solutions, Inc. recommendations, ClearaZyme™ Pool Water Cleaner & Clarifiers are considered to be nontoxic and nonhazardous.	N/A	N/A

**Trace Impurities:** None.

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH IDLH
	TWA	STEL	TWA	STEL	TWA	STEL	
Mixed enzymes.	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Natural polysaccharide	N/A	N/A	N/A	N/A	N/A	N/A	N/A

## Section 3 - Hazards Identification

☆☆☆☆☆ **Emergency Overview** ☆☆☆☆☆

<b>HMIS</b>	
<b>H</b>	0
<b>F</b>	0
<b>R</b>	0

### Potential Health Effects

**Primary Entry Routes:** By ingestion and through skin contact.

**Target Organs:** None known.

**Acute Effects (As-received Product)**

**Inhalation:** None.

**Eye:** Possible mild and temporary irritation.

**Skin:** Drying and defatting of contacted skin surfaces.

**Ingestion:** Possible mild gastrointestinal irritation with possible nausea and diarrhea.

**Carcinogenicity:** IARC, NTP, and OSHA do not list ClearaZyme™ Pool Water Cleaner & Clarifier as a carcinogen.

**Medical Conditions Aggravated by Long-Term Exposure:** None known.

**Chronic Effects:** There are no known chronic effects.

<b>PPE†</b>
†Sec. 8

## Section 4 - First Aid Measures

**Inhalation:** In the improbable event of product mist inhalation, remove the affected individual to fresh air and provide artificial respiration as required. Obtain medical attention.

**Eye Contact:** Flush thoroughly with water for five minutes and obtain medical attention if irritation of eye membranes persists.

**Skin Contact:** Wash contacted areas with soap and water and apply emollient skin cream to minimize dryness.

**Ingestion:** Drink several glasses of water. Obtain medical attention if gastrointestinal irritation, nausea or diarrhea persist.

**After first aid, get appropriate in-plant, paramedic, or community medical support if exposure symptoms persist.**

**Note to Physicians:** Under normal use and human exposure conditions, the product is considered nontoxic and nonhazardous.

**Special Precautions/Procedures:** None.

### Section 5 - Fire-Fighting Measures

**Flash Point:** None.  
**Flash Point Method:** N/A  
**Burning Rate:** N/A  
**Autoignition Temperature:** N/A  
**LEL:** N/A  
**UEL:** N/A  
**Flammability Classification:** Nonflammable.  
**Extinguishing Media:** N/A  
**Unusual Fire or Explosion Hazards:** None.  
**Hazardous Combustion Products:** Thermal oxidative decomposition of the product may release toxic fumes of CO, CO<sub>2</sub> and NO<sub>x</sub>.  
**Fire-Fighting Instructions:** Do not release runoff from fire control methods to sewers or waterways.  
**Fire-Fighting Equipment:** Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure-demand or positive-pressure mode.



### Section 6 - Accidental Release Measures

**Spill /Leak Procedures:**  
**Small Spills:** Flush small spills of five gallons or less with water to a sanitary sewer.  
**Large Spills**  
**Containment:** For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways.  
**Cleanup:** Use vacuum or absorbent methods to recover bulk of spilled material. Flush residual spilled product to a sanitary sewer.  
**Regulatory Requirements:** Follow applicable OSHA regulations (29 CFR 1910.120).

### Section 7 - Handling and Storage

**Handling Precautions:** Wear appropriate eye and glove protection to minimize exposure.  
**Storage Requirements:** Do not store with oxidizing materials, at temperatures below freezing or above 120°F, or expose to environments with a pH of < 3.0 or > 11.0.  
**Regulatory Requirements:** None established.

### Section 8 - Exposure Controls / Personal Protection

**Engineering Controls:**  
**Ventilation:** In the improbable event of product misting, provide general or local exhaust ventilation systems to minimize airborne concentrations. Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.  
**Administrative Controls:**  
**Respiratory Protection:** If product misting occurs, follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.  
**Protective Clothing/Equipment:** Wear chemically protective gloves to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.  
**Safety Stations:** Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.  
**Contaminated Equipment:** Separate contaminated work clothes from street clothes. Launder before reuse. Remove material from your shoes and clean personal protective equipment after use.  
**Comments:** Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

**Section 9 - Physical and Chemical Properties**

**Physical State:** Liquid.  
**Appearance and Odor:** Light amber, essentially no odor.  
**Odor Threshold:** Not determined.  
**Vapor Pressure:** < 10.0 mm Hg at 68°F (20°C).  
**Vapor Density (Air=1):** > 1.0  
**Formula Weight:** N/A  
**Density:** 8.59 lbs./gallon, typical.  
**Specific Gravity (H<sub>2</sub>O=1, at 4 °C):** 1.03 typical.  
**pH:** 3.5 – 4.0 Typical

**Water Solubility:** Complete in all proportions.  
**Other Solubilities:** Insoluble in hydrocarbons.  
**Boiling Point:** 212°F Typical.  
**Freezing Point:** 30°F Typical.  
**Viscosity:** Not determined.  
**Refractive Index:** Not determined.  
**Surface Tension:** Not determined.  
**% Volatile:** > 50.0%.  
**Evaporation Rate:** < 1.0 (Butyl Acetate = 1.0)

**Section 10 - Stability and Reactivity**

**Stability:** ClearaZyme™ Pool Water Cleaner & Clarifiers are stable at room temperature in closed containers under normal storage and handling conditions.

**Polymerization:** Hazardous polymerization cannot occur.

**Chemical Incompatibilities:** Direct contact with oxidizing materials may degrade product quality and activity.

**Conditions to Avoid:** Environments with a pH < 3.0 and > 11.0.

**Hazardous Decomposition Products:** Thermal oxidative decomposition of ClearaZyme™ Pool Water Cleaner & Clarifiers can produce CO, CO<sub>2</sub> and NO<sub>x</sub>.

**Section 11- Toxicological Information****Toxicity Data:**

**Eye Effects:** As received, mild and temporary irritation of eye membranes.

**Acute Inhalation Effects:**

Human, inhalation, TC<sub>Lo</sub>: Not established.

**Skin Effects:** Drying and defatting with prolonged exposure of skin surfaces, reversible with soap and water washing and emollient cream application.

**Acute Oral Effects:**

Rat, oral, LD<sub>50</sub>: Not established.

**Chronic Effects:** None known.**Carcinogenicity:** None known.**Mutagenicity:** None known.**Teratogenicity:** None known.

**Ingestion:** Possible mild gastrointestinal irritation.

**Section 12 - Ecological Information**

**Ecotoxicity:** Specific data not established. In extreme cases of bulk product spillage into marine or land environments, some lower life-form kill-off may occur. When applied as directed, ClearaZyme™ products are not toxic to piscine, reptilian and mammalian creatures.

**Environmental Fate**

**Environmental Transport:** Water or soil.

**Environmental Degradation:** Complete product biodegradation will occur within several days at environment temperatures above 60°F.

**Soil Absorption/Mobility:** Product will completely biodegrade within several days at environment temperatures above 60°F, with minimal leaching, if released on soil.

**Section 13 - Disposal Considerations**

**Disposal:** Contact Effective Pool Solutions, Inc., your local supplier or a licensed contractor for detailed recommendations. Recovered spilled product may be disposed of by either landfill or incineration. Follow applicable Federal, state, and local regulations.

**Disposal Regulatory Requirements:** None.

**Container Cleaning and Disposal:** Thoroughly clean empty containers with water and recycle. Do not use empty containers for food storage.

**Section 14 - Transport Information**

**DOT Transportation Data (49 CFR 172.101):**

**Shipping Name:** Cleaning Compound NOI.

**Shipping Symbols:** None.

**Hazard Class:** Nonhazardous.

**ID No.:** None.

**Packing Group:** N/A

**Label:** None.

**Special Provisions (172.102):** None.

**Packaging Authorizations**

a) **Exceptions:** N/A

b) **Non-bulk Packaging:** N/A

c) **Bulk Packaging:** N/A

**Quantity Limitations**

a) **Passenger, Aircraft, or Railcar:** None.

b) **Cargo Aircraft Only:** None.

**Vessel Stowage Requirements**

a) **Vessel Stowage:** None.

b) **Other:** N/A

**Section 15 - Regulatory Information**

**EPA Regulations:**

RCRA Hazardous Waste Number: Not listed (40 CFR 261.33)

RCRA Hazardous Waste Classification (40 CFR 261): Not classified

CERCLA Hazardous Substance (40 CFR 302.4) unlisted specific per RCRA, Sec. 3001; CWA, Sec. 311 (b)(4); CWA, Sec. 307(a), CAA, Sec. 112

CERCLA Reportable Quantity (RQ): None.

SARA 311/312 Codes: None.

SARA Toxic Chemical (40 CFR 372.65): Not listed

SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed, Threshold Planning Quantity (TPQ)

**OSHA Regulations:**

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed

OSHA Specifically Regulated Substance (29CFR 1910): Not listed.

**State Regulations:** None.

**Section 16 - Other Information**

**Prepared By:** R. J. Kersey

**Revision Notes:** July 2003

**Additional Hazard Rating Systems:** None.

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## SECTION VIII - REACTIVITY DATA

**Stability:** Stable.

**Conditions to Avoid:** None

**Incompatibility (materials to avoid):** Oxidizing materials; hydrogen is formed in the presence of aluminum.

**Hazardous Decomposition:** Carbon dioxide, carbon monoxide, ammonia and nitrogen oxides. Unidentified organic compounds may be formed during combustion.

**Hazardous Polymerization:** Will not occur.

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## SECTION IX - SPILL, LEAKAGE & DISPOSAL PROCEDURES

**Steps to take if material leaks or spills:** Soak up with absorbent material and scoop into drums. flush residue with plenty of water. Wash area with soap and water.

**Waste disposal method:** DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. Must comply with all Federal, State and Local regulations.

**For Unused & Uncontaminated Product:** Preferred option is to use a private licensed contractor.

\*\*\*\*\*

## SECTION X - SPECIAL PROTECTION DATA

**Ventilation:** Local ventilation is adequate for most conditions.

**Local Exhaust:** May be necessary for some operations.

**Eye Protection:** Use chemical goggles. Eye wash fountain should be located near work area.

**Respiratory Protection:** Use an approved NIOSH mist respirator.

**Protective Gloves:** Use gloves impervious to this material.

**Other Equipment:** Wear clean, long-sleeved, body-covering clothing.

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## SECTION XI - SPECIAL PRECAUTIONS DATA

**Handling and Storage:** Do not store in aluminum, carbon steel, copper, copper alloys, zinc or nickel containers. Store between 32F and 120F.

**Other:** None.

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## SECTION XII - TRANSPORTATION INFORMATION

This material is not a hazardous material and is not regulated by the D.O.T. For all transportation accidents, call CHEMTREC at 800-424-9300.

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The information herein is given in good faith but no warranty, expressed or implied, is made.

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PRODUCT CODE # 2204, 3104, 3154  
PRODUCT NAME: METAL OUT,  
SPA METAL OUT

MATERIAL  
SAFETY DATA  
SHEET  
11/10/02

### SECTION I - IDENTIFICATION

**CHEMICAL NAME & SYNONYMS:** Ethylenediaminetetraacetic Acid Tetrasodium Salt, Tetrasodium EDTA, Solution containing trace Sodium Hydroxide

**CHEMICAL FAMILY:** Aminocarboxylic acid salt

**FORMULA:** (CH<sub>2</sub>N)<sub>2</sub> (CH<sub>2</sub>COONa)<sub>4</sub>

**TRADE NAME:** NuClo Metal Out, Spa Metal and Private Label

**DESCRIPTION:** Light yellow liquid with very slight amine odor.

**CAS NO. Mixture:** Tetrasodium EDTA 64-02-8

**HMS HAZARD DATA:** Health Hazard: 1                      Fire Hazard: 0                      Reactivity: 0

### SECTION II - PHYSICAL DATA

**Boiling Point:** 219F

**Freezing Point:** 30F, -31C

**Vapor Pressure:** Same as water

**Specific Gravity (H<sub>2</sub>O=1):** 1.1 @ 25/25C

**% Volatile by Volume:** N/A

**Vapor Density:** Same as water.

**Solubility in water:** Completely miscible

**Evaporation Rate:** N/A

### SECTION III - HAZARDOUS INGREDIENTS

MATERIAL

CAS NO.%

BY WEIGHT

Tetrasodium salt of EDTA

000064-02-8

mixture

### SECTION IV - FIRE AND EXPLOSION HAZARD DATA

**Flash Point:** N/A

**Autoignition Temp:** N/A

**Flammable Limits in Air % By Volume:** N/A

**Extinguishing Media:** Water fog, Carbon dioxide, dry chemical.

**Special Fire Fighting Procedures:** Wear self-contained breathing apparatus and protective clothing.

**Unusual Fire and Explosion Hazards:** None

### SECTION V - HEALTH HAZARD DATA

#### EFFECTS OF OVEREXPOSURE:

**Inhalation:** Vapors or mists may cause irritation to respiratory tract.

**Skin:** Prolonged or repeated exposure may cause skin irritation or even burn.

**Eye:** May cause sever irritation with corneal injury which may result in impairment of vision and possibly blindness. Mists may cause eye irritation.

**Ingestion:** May cause gastrointestinal irritation or ulceration. May burn mouth and throat.

### SECTION VI - EMERGENCY AND FIRST AID PROCEDURE

**INHALATION:** Remove to fresh air if effects occur. Consult a physician.

**SKIN:** Wash off in flowing water or shower.

**EYE:** Immediately flush with water for at least 30 minutes. Immediately consult a physician.

**INGESTION:** Give large amounts of water or milk and transport to medical facility. DO NOT induce vomiting.

### SECTION VII - TOXICOLOGY

**Oral LD50(rat):** 3030 mg/kg

**Skin Absorption LD50 (rabbit):** >5000 mg/kg

#### CHEMICAL NAME:

Ethylenediaminetetraacetic Acid Tetrasodium Salt, Tetrasodium EDTA, Solution containing trace Sodium Hydroxide

**TRADE NAME:** NuClo Metal Out,  
Spa Metal and Private Label