

## TersOx™ - Catalyst SDS

### 1. Identification

#### 1.1. Product identifier

**Product Identity** TersOx™ - Catalyst

#### Alternate Names

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Intended use** Use for soil and groundwater remediation

**Application Method** See Technical Data Sheet.

#### 1.3. Details of the supplier of the safety data sheet

**Company Name** Tersus Environmental, LLC  
1116 Colonial Club Rd.  
Wake Forest, NC 27587

#### Emergency

**24-hour Emergency Telephone No.** 919 638 7892 (Gary M. Birk)

**Customer Service: Tersus Environmental, LLC** (919) 453-5577  
[info@tersusenv.com](mailto:info@tersusenv.com)  
www.tersusenv.com

### 2. Hazard(s) identification

#### 2.1. Classification of the substance or mixture

White or transparent crystalline powder. Noncombustible. At very high temperatures, Sulfur dioxide, sulfur trioxide and ammonia may be generated. No known chronic hazards. None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA, or ACGIH as a carcinogen.

#### OSHA Regulatory Status



#### Hazard Statement(s):

H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.  
H335 May cause respiratory irritation.

#### Prevention:

P234 Keep only in original container.  
P260 Do not breathe mist / vapors / spray.  
P264 Wash hands thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves / protective clothing / eye protection / face protection.

Eye contact may cause eye corrosion with corneal or conjunctival ulceration. Skin contact may cause skin irritation with discomfort or rash. Higher or prolonged skin irritation may cause burns or ulceration. Inhalation may cause irritation of the respiratory passages with cough, difficulty in breathing and bronchial irritation. Ingestion may cause irritation of the gastrointestinal tract with abdominal pain, nausea, vomiting, diarrhea, and abnormal kidney function. Ingestion may also cause corrosion of mucous membranes with stomach discomfort, nausea, and prostration. Individuals with preexisting diseases of the skin, kidneys, or reproductive system may have increased susceptibility to the toxicity of excessive exposure.

## 2.2. Label elements

**Appearance:** Granular to fine powder

**Physical State:** Solid

**Odor:** Particular

The compound is a skin and eye corrosive but is not a skin sensitizer in animals.

Toxic effects described in animals from a single exposure by inhalation include body weight losses, ocular and nasal discharges and other nonspecific effects. Repeated inhalation exposures produced liver, spleen, and thymus changes and gastrointestinal tract alterations. By ingestion, the administration of single high oral doses produced severe gastrointestinal tract irritation, liver damage, increased kidney weights, and the formation of dosing in cats produced weight and appetite loss, depression, vomiting, coma, convulsions, kidney failure due to calcium oxalate deposition, and death. Dogs given similar and higher doses exhibited no toxic effects. Long-term dosing in male and female rats exhibited no toxic effects.

At a high dietary level, a reduced number of offspring were observed in rats, but this effect occurred only at a maternally toxic dose. In a developmental toxicity study, fetal abnormalities were indicated in rats orally dosed during gestation with Synergist at levels that also produced maternal toxicity. The compound does not produce genetic damage in bacteria cell cultures.

### Hazards not otherwise classified (HNOC)

#### Other information

Acute Toxicity

Inhalation 4-hour LC50: 7.7 mg/L in rats

Oral LD50: 4,240 mg/kg in rats

## 3. Composition/information on ingredients

Synonyms:

<b>Ingredient/Chemical Designations</b>	<b>Weight %</b>
Acid	25 – 75
CAS Number: proprietary	
Salt	25 – 75
CAS Number: proprietary	

## 4. First aid measures

### 4.1. Description of first aid measures

**General** In all cases of doubt, or when symptoms persist, seek medical attention.  
Never give anything by mouth to an unconscious person.

**Inhalation** Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

**Eyes** Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

**Skin** Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. Wash clothing before reuse.

**Ingestion** If large quantities of this material are swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

#### **4.2. Most important symptoms and effects, both acute and delayed**

**Symptoms** No information available

#### **4.3 Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically

### **5. Fire-fighting measures**

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#### **5.1. Extinguishing media**

This material is compatible with all extinguishing media.

**Unsuitable extinguishing media** None

#### **5.2. Special hazards arising from the substance or mixture**

See section 2 for information on hazards when this material is present in the area of a fire

#### **5.3. Advice for fire-fighters**

Evacuate all non-essential personnel. Wear protective clothing and self-contained breathing apparatus. Remain upwind of fire to avoid hazardous vapors and decomposition products. Use water spray to cool fire-exposed containers.

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## 6. Accidental release measures

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### 6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

### 6.2. Environmental precautions

Sinks and mixes with water. No adverse effects known.

### 6.3. Methods and material for containment and cleaning up

For large spill cleanup: Keep unnecessary people away; isolate hazard area and deny entry. Do not touch walk through spilled material. Neutralize spills with lime or soda ash. Flush spill area with plenty of water. Observe environmental regulations.

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## 7. Handling and storage

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### 7.1. Precautions for safe handling

Avoid breathing dust. Promptly clean up spills.

### 7.2. Conditions for safe storage, including any incompatibilities

Keep containers closed and protected from extremes of temperature and humidity during storage. Recommended storage conditions 68-110°F and 55-87% relative humidity.

**Chemical Stability:** Stable

**Decomposition:** Will not occur

**Polymerization:** Will not occur

**Incompatible materials:** Hazardous reaction in aqueous solution may occur with chlorine, hypochlorous acid, hypochlorites, cyanides, nitric acid, or sulfides.

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## 8. Exposure controls and personal protection

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### 8.1. Control parameters Exposure

#### Exposure guidelines

<b>engineering controls</b>	Ensure adequate ventilation, especially in confined areas. Showers. Eyewash stations.
<b>Respiratory</b>	Provide workers with NIOSH approved respirators in accordance with requirements of 29 CFR 1910. 134 for level of exposure incurred.
<b>Eyes/face protection</b>	Wear chemical safety goggles
<b>Skin and body protection</b>	Wear gloves if abrasion or irritation occurs

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**9. Physical and chemical properties**

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Appearance	White-yellow Solid, granular to fine powder
Odor	Slight
Odor threshold	Not determined
pH	1.18 @ 25°C (77°F)
Melting point / freezing point	Not Measured
Initial boiling point and boiling range	209°C
Flash Point	Not Measured
Evaporation rate (Ether = 1)	Not Measured
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	<b>Lower Explosive Limit:</b> Not Measured <b>Upper Explosive Limit:</b> Not Measured
Vapor pressure (Pa)	Not Measured
Vapor Density	Not Measured
Specific Gravity	2.126 g/cm <sup>3</sup>
Solubility in Water	miscible
Partition coefficient n-octanol/water (Log K <sub>ow</sub> )	Not Measured
Auto-ignition temperature	Not Measured
Decomposition temperature	Not Measured
Viscosity (cSt)	Not Measured
Bulk Density	Not Measured

**9.2. Other information** No other relevant information.

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**10. Stability and reactivity**

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**10.1. Reactivity**

No data available.

**10.2. Chemical stability**

Stable under normal circumstances.

**10.3. Possibility of hazardous reactions**

No data available.

**10.4. Conditions to avoid**

Extreme temperature and direct sunlight.

**10.5. Incompatible materials**

Hazardous reaction in aqueous solution may occur with chlorine, hypochlorous acid, hypochlorites, cyanides, nitric acid, or sulfides.

**10.6. Hazardous decomposition products**

At very high temperatures, magnesium oxide, sulfur dioxide and sulfur trioxide may be generated.

## 11. Toxicological information

### Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
TersOx™ Catalyst	4,240	No data available	7.7 mg/l	No data available	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	---	Not Applicable
Serious eye damage/irritation	---	Not Applicable
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

## 12. Ecological information

### 12.1. Toxicity

No additional information provided for this product. See Section 3 for chemical specific data.

### Aquatic Ecotoxicity

Aquatic Toxicity - Slight

24-48-hour LC50, bluegill sunfish: 93mg/L

96-hour LC50, fathead minnows: 164 mg/L

These data indicate that TersOx™ Catalyst has slight aquatic toxicity

### 12.2. Persistence and degradability

Readily biodegradable. After 7 days, 89.6% is biodegraded (closed bottle test).

### 12.3. Bioaccumulative potential

Material does not bioaccumulate.

### 12.4. Mobility in soil

No available information

### 12.5. Results of PBT and vPvB assessment

No available information

### 12.6. Other adverse effects

No data available.

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## 13. Disposal considerations

### 13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.  
Do not reuse container

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## 14. Transport information

NFPA, NPCA-HMIS: NPCA - Rating: Health 1; Flammability 0; Reactivity 1; Personal Protection F

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## 15. Regulatory information

### International Inventories

TSCA

DSL/NDSL

EINECS/ELINCS

ENCS

IENSC

KECL Does not comply

PICCS

AICS

### Legend:

**TSCA** United States Toxic Substance Control Act Section 8(b) Inventory

**DSL/NDSL** Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** Japan Existing and New Chemical substances

**IECSC** China Inventory of existing Chemical Substances

**KECL** Korean Existing and Evaluated Chemical Substances

**PICCS** Philippines Inventory of Chemicals and chemical Substances

**AICS** Australian Inventory of chemical Substances

### US 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**

<b>Acute health hazard</b>	No
<b>Chronic health Hazard</b>	No
<b>Fire Hazard</b>	No
<b>Sudden release of pressure hazard</b>	No
<b>Reactive Hazard</b>	No

**CWA (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**

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) of 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****California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**US State Right-to-know regulations**

None

**16. Other information**

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NFPA Health hazards 1 Flammability 0 Instability 0 Physical and Chemical Properties -  
HMIS Health hazards 1 Flammability 0 Physical hazards 0 Personal Protection x

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**This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.**

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