

**SAFETY DATA SHEET**  
**TersOx™ Buffer - Carbonate Mixture**



Revision date: 2022-04-08  
Version 1.1

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Identifier**

Product Name: TersOx™ Buffer - Carbonate Mixture

Synonyms: Sodium bicarbonate, Sodium carbonate

Product Form: Mixture

**Recommended use of the chemical and restrictions on use**

Recommended Use: For use in buffering acid buildup in soil, sludge, and groundwater bioremediation

Restrictions on Use: Use as recommended by the label

**Details of the supplier and of the safety data sheet**

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

Contact Person              David F. Alden  
   Phone: +1-919-453-5577 x2002  
   Email: [david.alden@tersusenv.com](mailto:david.alden@tersusenv.com)

**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)
- +1-703-527-3887 (Chemtrec Outside United States 24 Hour Service – Emergency Only)
- +1-919-638-7892 Gary M. Birk (Outside office hours)

**2. HAZARD IDENTIFICATION**

**Classification**

OSHA Regulatory Status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Serious eye damage/eye irritation	Category 2B
Specific target organ toxicity (single exposure)	Category 2
Oxidizing Solids	Category 1

**GHS Label elements, including precautionary statements****Label elements****Hazard Pictograms****Signal word** Danger**Hazard Statements** Causes skin irritation (H315)  
Causes eye irritation (H320)  
May be corrosive to metals (H290)**Precautionary statements - Prevention**P234 – Keep only in original container  
P264 – Wash thoroughly after handling  
P280 – Wear protective gloves**Precautionary statements - Response**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 persists: Get medical advice/attention.  
P362 + P364 – Take off contaminated clothing and wash it before reuse.  
P390 – Absorb spillage to prevent material damage.**Precautionary statements - Storage**

P406 – Store in corrosive resistant container

**Precautionary Statements - Disposal**

P501 - Dispose of contents/ container to an approved waste disposal plant

**Other hazards**

N/A

**Unknown acute toxicity**

0% of the mixture consists of ingredient(s) of unknown toxicity

**3. COMPOSITION/INFORMATION ON INGREDIENTS****Chemical Formula** Mixture Na<sub>2</sub>CO<sub>3</sub> and NaHCO<sub>3</sub>**Hazardous components**

Chemical Name	CAS Number	Concentration (wt. %)
Sodium Carbonate	497-19-8	N/A
Sodium Bicarbonate	144-55-8	N/A
Other inorganic calcium compounds		

Synonyms are provided in Section 1.

Occupational exposure limits, if available, are listed in Section 8.

#### 4. FIRST AID MEASURES

General Information	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
Eye Contact	Mild to severe irritant to the eyes. May cause redness, irritation and/or conjunctivitis. In case of contact with eyes, flush eyes with low pressure water for at least 15 minutes holding eyelids open. If irritation persists, seek medical attention.
Skin Contact	Mild to severe irritant of the skin. May cause intense destruction of abraded skin. It is recommended that prolonged direct contact with skin be avoided. In case of contact with skin, wash skin with water for 15 minutes. Remove contaminated clothing and wash.
Inhalation	May cause irritation, sore throat and coughing if inhaled. Avoid inappropriate handling which may result in dust generation. If inhaled, remove from contaminated area to fresh air. Report situation. Seek medical attention if allergic response exhibited.
Ingestion	Ingestion of material may cause corrosion of gastric mucosa with sore throat and pain. May cause distention of the stomach, possible rupture. Renal injury will occur over 1g/kg. If swallowed, drink 2-4 glasses of water. Induce vomiting or perform gastric lavage if large amounts are ingested. Get medical attention.
Most important symptoms and effects, both acute and delayed	Corrosion of gastric mucosa if ingested.
Indication of any immediate medical attention and special treatment needed	Treat symptomatically

#### 5. FIRE-FIGHTING MEASURES

<b>Suitable Extinguishing Media</b>	Dry chemical, carbon dioxide, chemical foam or water fog
<b>Unsuitable extinguishing media</b>	Dry chemical. Foam.
<b><u>Explosion Data</u></b>	
<b>Sensitivity to Mechanical Impact</b>	Not sensitive.
<b>Sensitivity to Static Discharge</b>	Not sensitive.
<b>Specific Hazards Arising from the chemical or mixture</b>	Contain water runoff. Negligible hazard when exposed to flame.
<b>Special Fire Fighting Procedures</b>	Self-contained breathing apparatus recommended for fire fighters if large amount is present.

#### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Provide sufficient ventilation
<b>Environmental Precautions</b>	None
<b>Methods for Containment and Clean Up</b>	Spilled product should be removed immediately to avoid formation of dust. Contain spill, sweep up avoiding airborne dust. Provide sufficient ventilation. Avoid wash down except for small traces.

## 7. HANDLING AND STORAGE

<b>Precautions for safe handling</b>	• Avoid formation of dust. Provide adequate ventilation of the room when handling this product.
<b>Hygiene measures</b>	• Provide eyewash capability.
<b>Conditions for safe storage, including any incompatibilities</b>	• None

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

### Control parameters

Exposure guidelines, ingredients with workplace control parameters.

### Exposure

CAS No.	Ingredient	Source	Value
497-19-8	Sodium carbonate (Na <sub>2</sub> CO <sub>3</sub> )	OSHA	No Established Limit
		ACGIH	No Established Limit
144-55-8	Sodium bicarbonate (NaHCO <sub>3</sub> )	OSHA	PEL 10 mg/m <sup>3</sup> (total)
		ACGIH	TLV: 10 mg/m <sup>3</sup>

### Exposure Control

Appropriate engineering controls	Provide adequate ventilation. Where reasonably practicable this should be achieved using local exhaust ventilation and good general extraction. If these are not enough to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.
Eye/face protection	Safety glasses with side shield or face shield, or chemical goggles.
Respiratory protection	Dust mask or respirator for particle removal (NIOSH)
Skin	Wear long-sleeve shirt, trousers, safety shoes, gloves (rubber or vinyl)
Hygiene measures	Maintain good housekeeping. Avoid dusty conditions. Wash hands and exposed skin after contact. Avoid contact with food or food preparation surfaces. If exposure of food surfaces occurs, wash with germicidal detergent or chlorine bleach. Remove and wash contaminated clothing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Appearance</b>	White crystalline powder
<b>Odor</b>	None
<b>Odor threshold</b>	Not determined
<b>pH</b>	Does Not Apply
<b>Melting point / freezing point</b>	260 °C (550 °F)
<b>Initial boiling point and boiling range</b>	Not Measured
<b>Flash Point</b>	Not Measured
<b>Evaporation rate (Ether = 1)</b>	1
<b>Flammability (solid, gas)</b>	Not Applicable
<b><u>Upper/lower flammability or explosive limits</u></b>	

Lower Explosive Limit:	Not Measured
Upper Explosive Limit:	Not Measured
<b>Vapor pressure (Pa)</b>	Not Measured
<b>Vapor Density</b>	Not Measured
<b>Specific Gravity</b>	2.2-2.5 at 25 °C
<b>Solubility in Water</b>	7% at 0°C
<b>Partition coefficient n-octanol/water (Log Kow)</b>	Not Measured
<b>Auto-ignition temperature</b>	Not Measured
<b>Decomposition temperature</b>	Not Measured
<b>Viscosity (cSt)</b>	Not Measured

## 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	<ul style="list-style-type: none"> <li>Stable under normal conditions</li> </ul>
<b>Possibility of hazardous reactions</b>	<ul style="list-style-type: none"> <li>None known</li> </ul>
<b>Conditions to avoid</b>	<ul style="list-style-type: none"> <li>Exposure to strong acid can cause violent reaction with evolution of heat and carbon dioxide.</li> <li>Exposure to hot aluminum can cause explosive reaction with evolution</li> <li>Exposure to ammonium and silver nitrate can cause explosive reaction upon heating</li> <li>Exposure to aromatic amine and a chloronitro compound can cause a reaction with evolution of heat.</li> <li>Exposure to 2,4 dinitrotoluene can increase explosiveness.</li> <li>Exposure to flourine can cause violent ignition.</li> <li>Exposure to burning lithium releases radioactive sodium.</li> <li>Exposure to phosphorus pentoxide can cause a highly exothermic reaction.</li> <li>Exposure to hot sodium sulfide can cause an explosive reaction on exposure to water.</li> <li>Exposure to sulfuric acid can cause a violent eruption.</li> <li>Exposure to 2,4,6 trinitrotoluene can reduce explosion temperature.</li> </ul>
<b>Incompatible materials</b>	<ul style="list-style-type: none"> <li>Exposure to zinc can be corrosive.</li> <li>None known</li> </ul>
<b>Hazardous decomposition products</b>	<ul style="list-style-type: none"> <li>None known</li> </ul>

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	---	Mild
Serious eye damage/irritation	---	Mild
Respiratory sensitization	---	Large amounts will require medical attention.
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable

Classification	Category	Hazard Description
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

## 12. ECOLOGICAL INFORMATION

### Aquatic Ecotoxicity

Product degrades in time releasing plant nutrients. Increases pH of media.

### Persistence and degradability

Readily biodegradable

### Bioaccumulative potential

Information not available.

### Mobility in Soil

Information not available.

### Other adverse effects

Information not available.

## 13. DISPOSAL CONSIDERATIONS

### **Waste Disposal Methods**

Dispose of in accordance with current Federal, State, and Local regulations.

## 14. TRANSPORTATION INFORMATION

### DOT

Proper Shipping Name Chemicals not otherwise indexed (NOI) non-hazardous.

### UN Number

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

## 15. REGULATORY INFORMATION

### **Regulatory Overview**

All ingredients used are listed on the USEPA TSCA Inventory list.

**OSHA: Not hazardous under 29 CFR 1910.1200**

## 16. OTHER INFORMATION

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

Observe employment restrictions for people.

Product is not listed with IARC, NTP, ACGIH or OSHA as a carcinogen.

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

**Disclaimer:** The information contained in this Safety Data Sheet (SDS), as of the issue date, is believed to be true and correct. However, the accuracy or completeness of this information and any recommendations or suggestions are made without warranty, express or implied, or guarantee. Tersus Environmental, LLC urges each customer or recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. Since we cannot control the application, use or processing of the product, we do not accept responsibility. Therefore, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product and assure that the intended use of the product will not infringe in any party's intellectual property right. The information presented here pertains only to the product as shipped.

All recommendations for the use of our products, whether given by us, orally or to be implied from data or lab tests results by us, are based on the current state of our knowledge at the time those recommendations are made. When additional information is obtained, these recommendations may be updated. They may also be influenced by circumstances outside our control. Notwithstanding, such recommendation the user is responsible that the product as supplied by us is suitable to the process or purpose he/she intends to use it.

Due to the proliferation of sources for information such as manufacturer specific SDSs, we are not and cannot be responsible for SDSs obtained from any source other than ourselves. If you have obtained an SDS from another source or if you are not sure that the SDS you have is current, please contact us for the most current version.



919.453.5577 • info@tersusenv.com • tersus.com

TersOx is a Trademark of Tersus Environmental, LLC  
Copyright © 2022 Tersus Environmental, LLC. All Rights Reserved.

End of Safety Data Sheet