



Terra Systems pH Buff-UpTM

A Proprietary Buffering Package for Aquifer Remediation and Conditioning SAFETY DATA SHEET

1. Product Identification

Synonyms: Precipitated chalk or powdered limestone suspension
Recommended Use: Buffering of groundwater contaminated with chlorinated solvents and other anaerobically degradable compounds.
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2. Hazards Identification

Emergency Overview

Danger May causes irritation to skin, eyes, respiratory tract, and gastrointestinal tract.

Health Rating: 1 - Slight
Flammability Rating: 0 - None
Reactivity Rating: 0 - None
Contact Rating: 1 - Slight
Lab Protective Equipment: Goggles; Lab Coat; Vent Hood; Proper Gloves
Storage Color Code: Orange (General Storage)

Potential Health Effects

Inhalation: May cause respiratory irritation.
Ingestion: With intended use, the material is not expected to be an ingestion hazard. ...
Skin Contact: Causes skin irritation.
Eye Contact: Causes eye irritation.
Chronic Exposure: No information found.
Aggravation of Pre-existing Conditions: No information found.



INCORPORATED



3. Composition

Ingredient	Synonym	CAS #	Percent	Hazardous
Calcium Carbonate CaCO ₃	Carbonic acid, calcium salt; powdered limestone	471-34-1	45-55	No
Water		7732-18-5	45-55	No

Balance of other ingredients is less than 1% in concentration.

4. First Aid Measures

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion:

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention if adverse symptoms occur.

Skin Contact:

Causes mechanical irritation. Wash affected area with plenty of soap and water. If irritation persists, seek medical attention.

Eye Contact:

Immediately flush eyes with plenty of water for at least 5 minutes, lifting lower and upper eyelids occasionally. Get medical attention.

5. Fire Fighting Measures

Fire:

Not considered to be a fire hazard.

Explosion:

Not considered an explosion hazard.

Fire Extinguishing Media:

Use any means suitable for extinguishing surrounding fire including foam, dry powder, carbon dioxide, water spray, or sand. .

Special Information:

Use protective clothing and breathing equipment appropriate for the surrounding fire.

6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Avoid breathing dust. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal. Wash the area clean with water and detergent.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances including strong acids or oxidizers.



8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

USA OSHA PEL (TWA) 5 mg/m³.

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

For conditions of use where exposure to the dust or mist is apparent, a half-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear protective gloves and clean body-covering clothing.

Eye Protection:

Use chemical safety goggles and/or full-face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance:

White suspension.

Molecular Weight:

100.09 g/mole CaCO₃

Odor:

Odorless.

Solubility:

Dispersible in water. Soluble in acids.

Specific Gravity:

1.45 at 25 °C or 12.1 pounds/gallon

pH:

9.0-10.5

% Volatiles by volume @ 21C (70F):

0

Boiling Point:

No information found

Melting Point:

No information found

Flash Point

No information found

Autoignition Temperature

No information found

Decomposition Temperature

No information found

Vapor Density (Air=1):

No information found

Vapor Pressure (mm Hg):

No information found

Evaporation Rate (BuAc=1):

No information found.



10. Stability and Reactivity

Stability:	Stable under ordinary conditions of use and storage.
Reactivity:	Slight
Hazardous Decomposition Products:	Carbon dioxide (CO ₂) and calcium oxide
Hazardous Polymerization:	Will not occur.
Incompatibilities:	Acids
Conditions to Avoid:	Direct sunlight, extremely high or low temperatures. Strong acids or strong oxidizers...

11. Toxicological Information

Calcium Carbonate	Oral rat LD50: 6450 mg/kg. Causes skin and eye irritation.
Cancer Lists:	Not classified.
Calcium Carbonate (471-34-1)	No No None

12. Ecological Information

Environmental Fate:	No information found.
Environmental Toxicity:	No information found.
Degradability	No information found
Soil Mobility	No information found
Bioaccumulation Potential	No information found

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use, or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not regulated.

15. Regulatory Information

Listed on the United States TSCA (Toxic Substances Control Act) inventory.

Listed on the Canadian DSL (Domestic Substances List) inventory).

WHMIS Classification: Class D Davison 2 Subdivision B Toxic material causing other toxic effects.



16. Other Information

NFPA Ratings:

Label Hazard Warning:

Label Precautions:

Label First Aid:

Product Use:

Revision Information:

Disclaimer:

Health: 1 Flammability: 0 Reactivity: 0

Exposure could cause irritation, but only minor residual injury even if no treatment is given...

Eye, skin, and respiratory irritant

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If swallowed, **DO NOT INDUCE VOMITING**. Give large quantities of water. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. Get medical attention for any breathing difficulty. In all cases, get medical attention.

Buffering soil and groundwater

SDS Section(s) changed since last revision of document includes: None

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