SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

PRODUCT IDENTIFIER:	Purified Phosphoric Acid
PRODUCT CODE:	Not specified
RECOMMENDED USE:	LFP pCAM, specialty fertilizers
UFI NUMBERS:	Not specified

MANUFACTURER/SUPPLIER INFORMATION

COMPANY NAME:	Travertine Technologies
ADDRESS:	5311 Western Ave Ste 100, Boulder, Colorado, 80301, United States
PHONE NUMBER:	1-720-577-3122
EMAIL/WEBSITE:	lab@travertinetech.com | https://www.travertinetech.com
EMERGENCY CONTACT:	1-720-577-3122

SECTION 2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the OSHA's Hazard Communication Standard at 29 CFR 1910.1200

H290	**Category 1**
H302	**Category 4**
H312	**Category 4**
H314	**Category 1, 1A, 1B, 1C**

2.2 Label Elements

Signal Word Danger

Hazard Statements

HAZARD CODE	STATEMENT
H290	May be corrosive to metals
H302	Harmful if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage

Precautionary Statements

P234 - Keep only in original container.
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P264 - Wash hands [and ...] thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...
P316 - Get emergency medical help immediately.
P317 - Get emergency medical help.
P321 - Specific treatment (see ... on this label).
P330 - Rinse mouth.
P363 - Wash contaminated clothing before reuse.
P390 - Absorb spillage to prevent material damage.
P405 - Store locked up.
P406 - Store in corrosive resistant/... container with a resistant inner liner.
P501 - Dispose of contents/container to ...
P301+P317 - IF SWALLOWED: Get medical help.
P302+P352 - IF ON SKIN: wash with plenty of water/...
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P362+P364 - Take off contaminated clothing and wash it before reuse.

P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P361+P354 - IF ON SKIN: Take off Immediately all contaminated clothing. Immediately rinse with water for several minutes.
P305+P354+P338 - IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Composition/Information on Ingredients

CAS NO.	CHEMICAL NAME	CONCENTRATION (%)
7664-38-2	phosphoric acid	55-75% as H3PO4
7732-18-5	Water, purified	Balance

SECTION 4. FIRST AID MEASURES

4.1 Description of First Aid Measures

INHALATION : If inhaled, immediately remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, administer oxygen. Seek immediate medical attention.

SKIN CONTACT : Immediately flood the affected area with copious amounts of water for at least 30 minutes. Remove contaminated clothing while flushing. Seek immediate medical attention if irritation or pain persists after thorough washing.

EYE CONTACT : Immediately flush eyes with copious amounts of water for at least 30 minutes, occasionally lifting the upper and lower eyelids. Seek immediate medical attention. Continue irrigation while en route to medical care.

INGESTION : Immediate response: if the substance is ingested, immediately rinse the mouth with water. do not induce vomiting. give small quantities of water or milk to drink. never give anything by mouth to an unconscious person.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing Media

SUITABLE AGENTS :	Dry chemical extinguishers are suitable for phosphoric acid fires. They neutralize the acid and interrupt the chemical reaction, effectively suppressing the fire. Use caution to avoid splashing.
UNSUITABLE AGENTS :	Water streams are unsuitable for concentrated phosphoric acid fires. The reaction can cause splattering of the acid, spreading the fire and posing a significant burn hazard to responders.

5.3 Advice for Firefighters

GENERAL :	Water streams are unsuitable for concentrated phosphoric acid fires. The reaction can cause splattering of the acid, spreading the fire and posing a significant burn hazard to responders.
PROTECTIVE EQUIPMENT :	Water streams are unsuitable for concentrated phosphoric acid fires. The reaction can cause splattering of the acid, spreading the fire and posing a significant burn hazard to responders.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions

GENERAL :	Avoid contact with skin, eyes, and clothing. Wear appropriate personal protective equipment, including gloves, eye protection, and protective clothing, to prevent exposure to this material.

6.3 Methods and Materials for Containment and Cleaning Up

GENERAL :	For containment, neutralize spilled material with lime or soda ash, then absorb with inert materials like sand or vermiculite. Collect contaminated absorbent and place in suitable containers for disposal.
SMALL SPILLS :	Contain the spill immediately by creating a barrier with absorbent materials. Prevent the spilled material from entering drains, sewers, or waterways to minimize environmental impact and potential harm.
LARGE SPILLS :	For emergency response, immediately isolate the spill area and deny entry. Wear appropriate personal protective equipment, including acid-resistant gloves, clothing, and eye/face protection, before attempting cleanup.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling

GENERAL : Ensure adequate ventilation in the work area. When handling this material, use appropriate personal protective equipment, including chemical-resistant gloves, eye protection, and protective clothing. Avoid breathing vapors or mist. In case of insufficient ventilation, wear respiratory protection. Regularly inspect and maintain all safety equipment.

7.2 Conditions for Safe Storage

GENERAL : Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers tightly closed and protect from physical damage. Maintain adequate ventilation to prevent the buildup of vapors. Regularly inspect containers for leaks or signs of corrosion to ensure integrity and prevent accidental releases.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits Table

CAS NO.	CHEMICAL	REGULATION	METHOD	LIMIT VALUE
7664-38-2	phosphoric acid	Occupational Safety and Health Administration (OSHA)	REL-TWA (Time Weighted Average)	1 mg/m^3
7664-38-2	phosphoric acid	Occupational Safety and Health Administration (OSHA)	REL-STEL (Short Term Exposure Limit)	3 mg/m^3
7664-38-2	phosphoric acid	The National Institute for Occupational Safety and Health (NIOSH)	Recommended Exposure Limit	TWA 1 mg/m3 ST 3 mg/m3

8.2 Individual Protection Measures

Protective equipment

INHALATION :	Ensure adequate ventilation, especially in confined areas. If exposure limits are exceeded, wear approved respiratory protection. Following inhalation, move to fresh air and seek immediate medical attention if breathing is difficult.
EYE PROTECTION :	Wear appropriate eye protection, such as tightly fitting safety goggles or a face shield, to prevent contact. If eye contact occurs, immediately flush eyes with copious amounts of water for at least 30 minutes.
HAND PROTECTION :	Wear chemical resistant gloves composed of materials such as neoprene or butyl rubber during handling to prevent skin contact. If skin contact occurs, immediately flush affected area with copious amounts of water for at least 15 minutes.
SKIN AND BODY PROTECTION :	Wear appropriate chemical resistant gloves, clothing, and eye protection when handling this material to prevent skin contact. If skin contact occurs, immediately flush affected areas with copious amounts of water for at least 15 minutes.
SKIN PROTECTION :	To prevent skin contact, wear appropriate chemical resistant gloves and clothing. If skin contact occurs, immediately flush affected areas with copious amounts of water for at least 15 minutes.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties

EVAPORATION RATE :	Not specified
WATER SOLUBILITY :	Soluble
FLASH POINT :	Not specified
SG DENSITY :	1.38
UPPER EXPLOSIVE LIMIT :	Not specified
MELTING POINT :	Approximately -37degC
DECOMPOSITION TEMPERATURE :	Not specified
MOLECULAR WEIGHT :	Not specified

VAPOUR PRESSURE :	Not specified
TOTAL VOC G L :	Not specified
STATE :	solution
APPEARANCE :	Clear colorless liquid
PH :	<2
PH AS A SOLUTION :	Not specified
LOWER EXPLOSIVE LIMIT :	Not specified
BOILING POINT RANGE :	Approximately 110degC
AUTOIGNITION TEMPERATURE :	Not specified
VOLATILES :	Not specified
RELATIVE VAPOUR DENSITY :	Not specified
VISCOSITY :	Not specified

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

REACTIVITY :	This material may be corrosive to metals, potentially generating flammable hydrogen gas upon contact. Ensure proper ventilation and storage in compatible containers to prevent pressure buildup and potential hazards.
CHEMICAL STABILITY :	This material is considered stable under normal conditions of handling and storage. However, avoid extreme temperatures and sources of ignition, as these may accelerate degradation processes.
HAZARDOUS REACTIONS :	This material can react violently with strong bases, generating significant heat and potentially causing explosions or dangerous pressure increases. Handle with extreme caution in the presence of alkaline substances.
CONDITIONS TO AVOID :	Avoid contact with incompatible materials, such as strong bases, metals, and oxidizing agents, as hazardous reactions may occur, generating heat and potentially causing pressure build-up or release of corrosive fumes.
INCOMPATIBLE MATERIALS :	This material reacts violently with strong bases, generating significant heat and potential for dangerous splatter. Ensure proper ventilation and cooling when handling to prevent hazardous conditions.

HAZARDOUS DECOMPOSITION :	Thermal decomposition may release irritating and corrosive fumes, including phosphorus oxides. Avoid conditions that could lead to overheating or fire. Ensure adequate ventilation to prevent inhalation of fumes.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity table

CAS NO.	CHEMICAL	RESULT	DOSE	SPECIES	EXPOSURE
7664-38-2	phosphoric acid	LC50	850 mg/m3 in 1 Hr	Rat	Inhalation
7664-38-2	phosphoric acid	LD50	1530 mg/kg	Rat	Oral
7664-38-2	phosphoric acid	LD50	2740 mg/kg	Rabbit	Skin

11.1 Information on Toxicological Effects

TARGET ORGAN TOXICITY REPEATED :	Bronchial irritation with chronic cough.
TARGET ORGAN TOXICITY SINGLE :	Data not sufficient for classification
SKIN CONTACT :	Corrosive, exposure to skin may cause burns.
SERIOUS EYE DAMAGE :	Ingredients within this product are not found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, or CAL/OSHA and therefore are not considered to be, nor suspected to be, cancer-causing agents by these agencies.
CARCINOGENICITY :	Ingredients within this product are not found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, or CAL/OSHA and therefore are not considered to be, nor suspected to be, cancer-causing agents by these agencies.
REPRODUCTIVE TOXICITY :	No specific information is available concerning the effects of this product and its components on the human reproductive system.
MUTAGENICITY :	
TERATOGENICITY :	

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity Table

CAS NO.	CHEMICAL	SPECIES	RESULT	VALUE	DURATION
7664-38-2	phosphoric acid	Mosquitofish	LC50	138 mg/L	96 hr

12.2 Persistence and Degradability

GENERAL : No specific data available on this product.

12.3 Bioaccumulative Potential

BIOACCUMULATIVE POTENTIAL : No specific data available on this product.

12.4 Mobility in Soil

GENERAL : No specific data available on this product.

12.6 Endocrine Disrupting

PERSISTENT ORGANIC POLLUTANT : No specific data available on this product.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

APPROPRIATE DISPOSAL : Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

SECTION 14. TRANSPORT INFORMATION

14.1 UN Number

UN ID NUMBER:	1805
SHIPPING NAME:	Phosphoric acid solution
ENVIRONMENTAL HAZARDS :	Not applicable
SPECIAL PRECAUTIONS :	Not applicable

Transport Information

TRANSPORT MODE	SUB RISK	PACKAGING GROUP
DOT	Class 8 Corrosive Liquid	III
IATA	Class 8 Corrosive Liquid	III

SECTION 15. REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations

GENERAL :

The mixture contains chemicals that falls under the following regulatory Lists.

- Z-1 Table OSHA
- Pennsylvania Hazardous Substance List

SECTION 16. OTHER INFORMATION

16.1 Other Information

OTHER INFORMATION :

Revision Information

- Date of Current Revision: 2025-11-19
- Date of Original Creation: 2025-11-14

Abbreviations and Acronyms

- **CAS:** Chemical Abstracts Service
- **GHS:** Globally Harmonized System of Classification and Labelling of Chemicals
- **CLP:** Classification, Labelling and Packaging Regulation (EC) No. 1272/2008
- **OSHA:** Occupational Safety and Health Administration
- **ATE:** Acute Toxicity Estimate
- **STOT:** Specific Target Organ Toxicity
- **PBT:** Persistent, Bioaccumulative, Toxic
- **vPvB:** Very Persistent and Very Bioaccumulative

Key Literature References and Sources

- Data from manufacturer/supplier
- ECHA (European Chemicals Agency) database
- OSHA Hazard Communication Standard (29 CFR 1910.1200)
- Relevant scientific literature and toxicological databases

Training Advice

- Ensure employees are trained on safe chemical handling.
- Provide instruction on proper PPE use, storage, and emergency procedures.

This Safety Data Sheet complies with GHS requirements and relevant regulations.

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