Safety Data Sheet

Section 1: Identification

Product Name: Triple SuperPhosphate

Product form: Inorganic Salt

Use of product: Fertilizer

Synonyms: Calcium phosphate
Monobasic
GTSP
Granular TPS
Superphosphates, concentrated
Triple super phosphate (TSP)

Produced by:

The Espoma Company
6 Espoma Road
Millville, NJ 08332
Emergency phone number: 800-634-0603

Section 2: Hazards Information

Contains no hazardous ingredients

Classification (GHS – US): Eye Damage-Category 1 [H318]

GHS – US Labeling: H318-Causes serious eye damage

Precautionary Statements:
P280- Wear protective gloves, protective clothing and eye protection
P305 + P351 + P338 + P310- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

Other hazards: No additional information available

Section 3: Composition / Information on Ingredients:

Substances
Product Description: Superphosphates, concentrated
Additional Information: This product is a multi-constituent substance.

CAS #	Name	% by Weight	EC Number
7758-23-8	Calcium Phosphate, Monobasic	>/=65	231-837-1
7778-18-9	Calcium Sulfate, Natural	>/=3	231-900-3
7757-93-9	Calcium Phosphate, Dibasic	>/=2	231-826-1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to the health or the environment and hence require reporting in this section.

**The exact percentage (concentration) of composition has been withheld as a trade secret.*

Section 4: First Aid Measures

Exposure	Symptoms	Recommendation
Inhalation	Mild Irritation	If product dust causes respiratory irritation or distress, move the exposed person to fresh air immediately, If breathing is difficult or irregular, administer oxygen; if respiratory arrest occurs, start artificial respiration by trained personnel. Loosen fight fitting clothing such as a collar, tie, belt or waistband. Seek medical attention if cough or other symptoms appear or persist.
Skin Contact	Mild Irritation	Flush skin with large amounts of water while removing contaminated clothing and continue rinsing for at least 15 minutes. Wash contaminated clothing and shoes thoroughly before reuse. If irritation develops and persists after washing, seek medical attention.
Eye Contact	Mild Irritation	Do not rub eyes. Move victim away from exposure into fresh air. Flush eyes with plenty of clean water for at least 15 minutes. If symptoms persist, seek medical attention.
Ingestion	Mild Irritation	Rinse mouth with water if victim is conscious. Remove dentures, if present. Give 2-3 glasses of water to drink if victim is conscious, alert and able to swallow. Do not induce vomiting unless directed to do so by medical personnel. Vomiting may occur spontaneously. If vomiting does occur and the victim is conscious, give water to further dilute the chemical. Never give anything by mouth to an unconscious or convulsing person. Obtain immediate

		medical assistance.
Note to Physician	None Known	

Most Important symptoms and effects both acute and delayed
Potential Health Symptoms and Effects

Exposure	**Symptoms**
Inhalation	Inhalation of dust may cause irritation of the nose, throat, mucous membranes and respiratory tract.
Skin Contact	May cause skin irritation with localized redness, itching and discomfort.
Eye Contact	Causes severe eye irritation and eye damage. Symptoms include redness, swelling, pain, tearing and blurred vision. May cause burns and permanent eye damage. May cause mechanical irritation of the eye and surrounding tissue.
Ingestion	May cause irritation of the gastrointestinal tract with headache, nausea, vomiting, abdominal pain and diarrhea.
Chronic	Persons with pre-existing skin disorders or impaired respiratory function may be more susceptible to the effects of this substance.

Indication of any immediate medical attention and special treatment needed

Advice to Doctor and Hospital Personnel

Persons with impaired kidney function may be more susceptible to the effects of this substance. Treat symptomatically and supportively.

Phosphates are slowly and incompletely absorbed when ingested and seldom result in system effects. Such effects however have occurred. Symptoms may include vomiting, lethargy, diarrhea, blood chemistry effects, cardiac effects and central nervous system effects. The toxicity of phosphates is due to their ability to sequester calcium.

Ingestion of large quantities of phosphate salts (>1.0g for an adult) may cause an osmotic catharsis resulting in diarrhea and probable abdominal cramps. Larger doses such as 4-8 g will almost certainly cause these effects in everyone. In healthy individuals most if the ingested salt will be excreted in the feces with the diarrhea and, therefore, causing no systemic toxicity. Doses greater than 10g hypothetically may cause systemic toxicity. Treatment should take into consideration both anionic and cationic portions of the molecule.

Section 5: Fire-fighting Measures:

Extinguishing media: Use fire extinguishing materials appropriate for surrounding fire.

Unsuitable methods of extinction: Not known

Protection of Firefighters:
No unusual fire or explosion hazards are expected.

Special hazards arising from the substance or mixture
Closed containers may explode due to the buildup of pressure when exposed to extreme heat. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent or delayed. Obtain medical attention.
Water used for fire suppression and cooling may become contaminated. Discharge to sewer system(s) or the environment may be restricted, requiring containment and proper disposal of water (see Section 6).

Explosion Hazards: Material does not present an explosion hazard.

Advice for Firefighters: Full protective equipment including self-contained breathing apparatus should be used. Water may be used to cool closed containers to prevent pressure buildup and possible auto ignition or explosion when exposed to extreme heat. If possible prevent runoff water from entering storm drains or bodies of water.

Section 6: Accidental Release Measures:

Response Techniques: Stay upwind and away from spill (dust hazard). Wear appropriate protective equipment, including respiratory protection, as conditions warrant (See Section 8).Prevent spilled material from entering sewers, storm drains, other unauthorized treatment drainage systems, and natural waterways. Notify appropriate federal, state, and local agencies as may be required (see Section 15). Minimize dust generation. Sweep up and package appropriately for disposal. Large spills can harm or kill vegetation.

If uncontaminated: Sweep up or collect, and reuse as product. If contaminated with other materials, collect in suitable containers.

WASTE DISPOSAL METHOD: Contaminated material can generally be disposed of in an approved disposal facility, in accordance with applicable federal, state, and local regulations.

Environmental Precautions: Prevent from entering storm drains or bodies of water.

Section 7: Handling & Storage:

Handling: The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Section 8). Minimize dust generation. Avoid contact with eyes, skin, and clothing. Do not breathe dust. If normal use of material presents a respiratory hazard, use only adequate ventilation or wear an appropriate respirator.

Storage: Use and store this material in dry, well-ventilated areas. Store only in approved containers. Keep container(s) tightly closed and correctly labeled. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage. Keep container tightly closed to prevent moisture absorption. Ventilate closed areas. Do not take internally. Keep out of reach of children.

Incompatible Materials: Alkalis , urea

Section 8: Exposure Controls / Personal Protection:

Exposure Controls: Use process enclosure, general dilution ventilation or local exhaust systems where necessary to maintain airborne dust concentration below the OSHA standards or in accordance with applicable regulations.

Personal Protective Equipment (PPE)

Eye/Face: Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended.

Skin: The use of cloth or leather work gloves is advised to prevent skin contact, possible irritation and absorption.

Respiratory: A NIOSH approved air purifying respirator with a type 95 (R or P) particulate filter may be used under conditions where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). Use a positive pressure air supplied respirator if there is potential for uncontrolled release, exposure levels are not known or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed if workplace conditions warrant a respirator.

Other: A source of clean water should be available in the work area for flushing eyes and skin. Impervious clothing should be worn as needed.

Exposure Guidelines: Contains no substances with occupational exposure limit values.

General Hygiene Considerations: Wash thoroughly after handling. Use adequate ventilation

Section 9: Physical & Chemical Properties:

Appearance	Grey to light brown crystalline powder	**Flash Point**	Not applicable
Odor	Acidic	**Autoignition Temperature:**	Not applicable
Odor Threshold	No Data Available	**Decomposition Temperature**	>200°C (>392°F)
Molecular Weight	Not applicable	**Lower Explosive Limit (LEL)**	Not applicable
Chemical Formula	Not applicable	**Upper Explosive Limit (UEL)**	Not applicable
pH	3.6 (1% aqueous solution @ 20°C)	**Vapor Pressure**	6.3 e-9mm Hg @ 20°C
Freezing/Melting Point/Range	No Data Available	**Vapor Density:**	Not determined
Initial Boiling Point	Decomposes	**Bulk Density**	1.0-1.2 @ 20° C
Evaporation Rate	Not applicable	**Viscosity**	No data available
Flammability	Not applicable	**Solubility in Water**	Partial
Partition Coefficient: n-octano/water	No data available	**Volatiles by Volume @ 21°C**	0%

Section 10: Stability & Reactivity:

Reactivity: Reacts with alkali lyes. Mixing with urea forms urea phosphate, which is very sticky.
Chemical Stability: Stable under normal conditions of storage and handling. Material is hygroscopic (May absorb moisture from air when relative humidity >72%).
Possibility of hazardous reactions: Not known.
Conditions to avoid: High temperatures; incompatible materials; moisture and exposure to air. Avoid dust generation.
Incompatible materials: Alkalis, urea
Hazardous Decomposition Products: Thermal decomposition products include phosphorus oxides, sulfur, toxic gases and fumes.
Hazardous Polymerization: Will not occur

Section 11: Toxicological Information:

Acute Oral Toxicity: LD_{50} (rat, oral) > 2000 mg/kg
Acute Inhalation Toxicity: LC_{50}, rat: >4.0mg/l, 4h
Acute Dermal Toxicity: $LD_{50,}$ rat: >2,000mg/kg
Skin irritation/corrosion: May cause skin irritation.
Eye irritation/corrosion: Causes severe eye irritation and possible eye damage
Sensitization: No data available
Genotoxicity in vitro/ in vivo: No data available
Mutagenicity: No data available
Specific organ toxicity- single exposure: May cause irritation of the respiratory system
Specific organ toxicity-repeated exposure: No data available
Aspiration Hazard: No data available

Further information
This material is not listed as a carcinogen by IARC, ACGIH, NTP, or OSHA. No data is available regarding the mutagenicity or teratogenicity of this material, nor is there available data that indicates that it causes adverse developmental or fertility effects in humans.
Handle in accordance with good industrial hygiene and safety practice.

Section 12: Ecological Information:

No Information Available.

Section 13: Disposal Considerations:

No Information Available.

Section 14: Transport Information:

No Information Available.

Section 15: Regulatory Information:

No Information Available.

Section 16: Other Information:

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