1. CHEMICAL PRODUCT AND COMPANY INDENTIFICATION

Product Identity: TMB 455 P

Recommended use of the chemical and restrictions on use: Used for water treatment.

Thornton, Musso & Bellemin,
P. O. Box 181
Zachary, LA 70791

(800) 762-9104 (8am-4pm CST)
CHEMTREC #: 1-800-424-9300 (24 Hr.)

MSDS number: 00033
CAS No: Mixture
Chemical Formula: Not Applicable
Chemical Family: Not Applicable
Date of MSDS Preparation: June 1, 2015

Certified to NSF ANSI 60
Max Use Level 18 mg/L
Plant # 9 USA
Lot #

2. HAZARDS IDENTIFICATION

Hazard pictograms (GHS-US):

Physical	Health	Environment
Corrosive to Metals Category 1	Skin Corrosion Category 1 Eye Damage Category 1 Acute Toxicity Category 4 Specific Target Organ Toxicity Single Exposure Category 3 (Irritation)	Aquatic Acute Toxicity Category 1 Aquatic Chronic Toxicity Category 1

GHS Label Elements:

Contains: Zinc Chloride and Orthophosphoric Acid

Signal word (GHS-US): DANGER

Hazard statements (GHS-US):

H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements (GHS-US):

P234 - Keep only in original container.
P260 - Do not breathe mist, vapours, spray
P264 - Wash exposed skin thoroughly after handling
P280 - Wear protective gloves, protective clothing, eye protection, face protection
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/physician
P363 - Wash contaminated clothing before reuse
P405 - Store locked up
P501 - Dispose of contents/container to comply with local, state and federal regulations

---

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Amount
Water	7732-18-5	25-35 %
Zinc Chloride	7646-85-7	15-25 %
Orthophosphoric Acid	7664-38-2	40-50 %

The exact concentration is being withheld as a trade secret.

---

4. FIRST AID

Eye: Immediately flush victim's eyes with large quantities of water for at least 20 minutes, while holding the eyelids apart. Get immediate medical attention.
Skin: Immediately remove contaminated clothing and wash skin thoroughly with soap and water for at least 30 minutes. Get immediate medical attention. Launder clothing before re-use. (Discard contaminated shoes). **Ingestion:** Do NOT induce vomiting. If conscious, give large quantities of water. Never give anything by mouth to an unconscious or convulsing person. Get immediate medical attention.

Inhalation: Immediately remove victim to fresh air. If breathing is difficult, oxygen should be administered by qualified personnel. If breathing has stopped, administer artificial respiration. Get immediate medical attention.

Most important Symptoms: Causes severe irritation and burns to eyes and skin. Inhalation of mists may cause mucous membrane and respiratory irritation and possibly nasal ulceration. May be harmful or fatal if swallowed. Prolonged inhalation exposure to mists or fumes may cause lung damage.

Indication of immediate medical attention/special treatment: Immediate medical attention required for all routes of exposure.

5. FIRE FIGHTING MEASURES

Suitable (and Unsuitable) Extinguishing Media: Use media appropriate for surrounding fire. Cool fire exposed containers and structures with water.
Specific hazards arising from the chemical: Non-combustible, substance itself does not burn but may decompose upon heating to produce hazardous combustion products. Aqueous solutions may cause surfaces to be extremely slippery and cause a slip hazard. Orthophosphoric acid may react with metals to liberate flammable hydrogen gas. Thermal decomposition may yield oxides of phosphorus and zinc, zinc chloride fumes and hydrogen chloride.
Special Protective Equipment and Precautions for Fire-Fighting Instructions: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing. Contain water used in firefighting from entering sewers or natural waterways.
Explosion Data (sensitivity to mechanical impact or static discharge): None known.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures: Evacuate spill area and keep unprotected personnel away. Wear appropriate protective clothing as described in Section 8. Aqueous solutions may cause surfaces to be extremely slippery and cause a slip hazard. Avoid releases to the environment.

Methods and Materials for Containment and Cleaning Up: Dike and contain liquid. Carefully neutralize with soda ash. Exercise caution during neutralization since large amounts of heat may be generated. Collect neutralized liquid with an inert absorbent and place in appropriate containers for disposal. Prevent spill from entering sewers and water courses. Report releases as required by local, state and federal authorities.

7. HANDLING/STORAGE

Precautions for Safe Handling: Prevent contact with the eyes, skin and clothing. Avoid breathing mists or aerosols. Wear protective clothing and equipment as described in Section 8. Use with adequate ventilation. Wash thoroughly with soap and water after handling. Keep containers closed when not in use.

Always add acid to water- not water to acid. Adding water to acid generates heat and will cause dangerous boiling and splashing.

Do not reuse containers. Empty containers retain product residues and can be hazardous. Follow all SDS precautions when handling empty containers.

Conditions for Safe Storage, Including Any Incompatibilities: Store in a cool, dry, well ventilated area away from incompatible materials. Protect from physical damage. Keep in original container.

8. EXPOSURE CONTROLS/PROTECTIVE EQUIPMENT

Exposure Guidelines:

Zinc Chloride (fume or respirable dust)	1 mg/m3 TWA, 2 mg/m3 STEL ACGIH TLV 1 mg/m3 TWA OSHA PEL
Orthophosphoric Acid	1 mg/m3 TWA OSHA PEL 1 mg/m3 TWA, 3 mg/m3 STEL ACGIH TLV

Engineering Controls: Use with adequate general or local exhaust ventilation to maintain exposure levels below the occupational exposure limits.
Respiratory Protection: In operations where exposure levels are exceeded, a NIOSH approved respirator with dust/mist cartridges or supplied air respirator appropriate for the form and concentration of the contaminants should be used. Selection and use of respiratory equipment must be in accordance with OSHA 1910.134 and good industrial hygiene practice.
Skin Protection: Wear impervious gloves such as rubber or neoprene to avoid skin contact.
Eye Protection: Safety goggles and face shield recommended.
Other: Long-sleeved clothing and long pants recommended to avoid prolonged skin contact. Suitable washing facilities should be available in the work area.

9. PHYSICAL/CHEMICAL PROPERTIES

Appearance and Odor: Clear, colorless liquid with a slight odor.

Physical State: Liquid	**Odor Threshold:** Not established
Vapor Density: Same as water	**Initial Boiling Point/Range: >**100°C (>212°F)
Solubility In Water: Soluble	**Vapor Pressure:** Same as water
Relative Density: 1.56-1.64	**Evaporation Rate:** Same as water
Melting/Freezing Point: Not applicable	**pH:** <1
VOC Content: 0%	**Octanol/Water Coefficient:** Not determined
Solubility: Soluble	**Decomposition Temperature:** Not determined
Viscosity: Not determined	**Flammability (solid, gas):** Not applicable
Flashpoint: None	**Autoignition Temperature:** None
Flammable Limits: LEL: Not applicable	**UEL:** Not applicable

10. STABILITY/REACTIVITY

Reactivity: Not normally reactive.

Chemical Stability: Stable under normal storage and handling conditions.

Possibility of Hazardous Reactions: Orthophosphoric acid may react with metals to liberate flammable hydrogen gas. Orthophosphoric acid may also corrode some metals.

Conditions to Avoid: None known.
Incompatible Materials: Strong bases, strong oxidizing agents, strong reducing agents, fluorine, metals, sulfur trioxide, phosphorus pentoxide, cyanides, sulfides.

Hazardous Decomposition Products: When heated to decomposition emits toxic oxides of phosphorus and zinc, zinc chloride fumes and hydrogen chloride.

11. TOXICOLOGICAL INFORMATION

HEALTH HAZARDS:
Ingestion: Ingestion may cause severe mucous membrane and gastrointestinal irritation with chemical burns. May cause nausea, vomiting, diarrhea, abdominal pain, chest pain, shortness of breath, profuse sweating, low blood pressure, tachycardia (rapid heartbeat), pulmonary edema, seizures, shock and death.
Inhalation: Inhalation of mists may cause irritation of the nose throat and upper respiratory tract. High concentrations may cause lung damage (pulmonary edema).
Eye: May cause severe irritation or burns with pain and tearing. Corneal damage with permanent blindness is possible.
Skin: May cause severe irritation or burns.
Sensitization: This material is not known to cause sensitization.
Chronic: Repeated exposure to zinc chloride may cause dermatitis, boils, eye conjunctivitis and gastrointestinal disturbances. Prolonged inhalation exposure to mists or fumes may cause lung damage.
Carcinogenicity: None of the components is listed as a carcinogen or suspected carcinogen by IARC, NTP or OSHA.
Germ Cell Mutagenicity: None currently known.
Reproductive Toxicity: None currently known.

Numerical Measures of Toxicity:
Zinc Chloride: Oral rat LD50 - 350 mg/kg
Orthophosphoric acid: Oral rat LD50- 1530 mg/kg; Inhalation rat LC50- >850 mg/m3/1Hr; Skin rabbit LD50- 2740 mg/kg

Ecotoxicity:
Zinc Chloride: 48 hr LC50 Daphnia magna- 0.798 mg/L; 96 hr LC50 Bluegill sunfish - 4.2 mg/L; 96 hr LC50 rainbow trout - 0.136 mg/L.
Orthophosphoric Acid: 96 hr LC50 Mosquitofish- 138 mg/L

This product is classified as very toxic to the aquatic environment with long-term adverse effects. Releases to the environment should be avoided.

Persistence and Degradability: No data available.
Bioaccumulative Potential: No data available
Mobility in Soil: No data available
Other Adverse Effects: None known

---

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with local, state and federal environmental regulations.

EPA Waste ID Number: None

14. TRANSPORT INFORMATION

DOT Hazardous Materials Description:
Proper Shipping Name: Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric Acid, Zinc Chloride) UN Number: UN3264
Hazard Class/Packing Group: 8, III
Labels Required: Corrosive

Note: If RQ for Zinc Chloride is exceeded, the following should be used: UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric Acid, Zinc Chloride), 8, PGIII RQ

15. REGULATORY INFORMATION

CERCLA: Releases above the reportable quantity of 2,500 lbs (based on the RQ of 1,000 lbs for Zinc Chloride present at 20-40%) must be reported to the National Response Center. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

SARA Hazard Category (311/312): Acute Health

SARA 313: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): Zinc chloride (zinc compound) 10-20%

EPA TSCA Inventory: All of the ingredients in this product are listed on the EPA TSCA Inventory.

CANADA:

This product has been classified under the CPR and this SDS discloses information elements required by the CPR.

Canadian CEPA: All the components of this product are listed on the Canadian DSL.

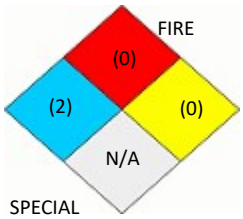
Canadian WHMIS Classification: Class E (Corrosive material)

16. OTHER INFORMATION

HAZARDOUS MATERIAL INFORMATION SYSTEM (HMIS)

HEALTH		2
FLAMMABILITY		0
PHYSICAL		0
PERSONAL PROTECTIO	N	D

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)



HEALTH

INSTABILITY

GENERAL INFORMATION

Classified as corrosive class 8 for transportation on the basis of its effect on mild steel.

All information given here is without warranty or representation. We do not assume any legal responsibility for the same. Nor do we give permission, inducement, or recommendation to practice any patented invention without a license. This information is offered solely for your product.