



Date of Issue: 6/1/2022      Revision Date: 9/1/2023      Version 2.0

## 1. Identification

**Product Name:** P, Extractant, 786001SS

**Identifier:** Concentrated Mehlich III Extractant Solution for Soil Analysis

**Contains CAS-No:** 6484-52-2, 64-19-7, 7697-37-2, 12125-01-8

**Identified Uses:** Reagent for analysis, laboratory chemicals

**Recommended Use:** professional, scientific and technical activities

**Restriction on Use:** Not for food, drug, or household use

**Supplier:**

Precision Planting  
23207 Townline Road  
Tremont, IL 61568  
(309) 925-5050

**Emergency Number:** CHEMTREC: 1-800-424-9300 within USA or Canada  
or +1-703-527-3887 outside USA or Canada

## 2. Hazards Identification

**Classification of substance or mixture:**

Skin Irritant (Category 2)

Serious Eye Damage (Category 1)

Respiratory Sensitizer (Category 1)

Reproductive Toxicity (Category 2)

**Labeling Elements:**



**Signal Word:** Danger

**Hazard Statement:**

Causes skin irritation

Causes serious eye damage

May cause allergy or asthma symptoms or breathing difficulty if inhaled

Suspected of damaging fertility or the unborn child

**Precautionary Statement:**

Wear protective gloves and eye protection. Do not handle until all safety precautions are read and understood. Do not breathe fumes, mists, or vapors. Wash thoroughly after handling.

IF SWALLOWED: Rinse mouth with water. Do NOT induce vomiting. Call a poison center or physician if you feel unwell.

IF ON SKIN: Take off contaminated clothing. Rinse skin with soap and water for at least 15 minutes. If skin irritation occurs, get medical help.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. If symptoms persist, get medical help.

IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing, get medical help.

**Storage:** Store away from incompatible materials. Keep away from children.

**Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Supplemental Hazard Statements:** Call a poison center or doctor if you feel unwell. If skin irritation occurs or persists, seek medical attention or advice.

**Hazards not otherwise classified:** None identified

### 3. Composition/Information on Ingredients

Name:	Formula	Molar Mass	CAS Number	% Weight
Water	H <sub>2</sub> O	18.015 g/mol	7732-18-5	> 90
Ammonium Nitrate	NH <sub>4</sub> NO <sub>3</sub>	80.043 g/mol	6484-52-2	< 10
Acetic Acid	C <sub>2</sub> H <sub>4</sub> O <sub>2</sub>	60.052 g/mol	64-19-7	< 5
Nitric Acid	HNO <sub>3</sub>	63.012 g/mol	7697-37-2	< 1
Ammonium Fluoride	NH <sub>4</sub> F	37.037 g/mol	12125-01-8	< 1

\* Specific chemical identity and/or percentage of composition may be withheld as a trade secret

### 4. First-Aid Measures

**General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice, show the chemical label where possible.

Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves. Wash contaminated clothing before reuse.

**If swallowed:** Rinse mouth. Do NOT induce vomiting. Obtain medical attention. Call a poison center or doctor/physician if you feel unwell.

**If inhaled:** Move to fresh air. Keep at rest in a comfortable position for breathing. Call a physician if symptoms develop.

**In case of skin contact:** Wash off immediately with plenty of water for at least 15 minutes. Wash contaminated clothing before reuse.

**In case of eye contact:** Rinse cautiously with water for several minutes, including under eyelids. Remove contact lenses, if present and easy to do. Continue rinsing.

**Protection of First aiders:** Use personal protection equipment. See Section 8 for more detail. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

**Symptoms/Effects:** Not expected to present a significant hazard under anticipated conditions of normal use. Notes to physician, treat symptomatically.

Refer to Sections 2 and/or 11 for hazard information and/or toxicological information.

## 5. Fire-Fighting Measures

**Fire Hazard:** Not flammable

**Explosion Hazard:** Not applicable

**Reactivity:** None

**Suitable Extinguishing Media:** Water, Water fog, Foam, Dry chemical powder, Carbon dioxide

**Unsuitable Extinguishing Media:** Do not use a water jet as an extinguisher, as this will spread the fire.

**Advice for firefighters:** In case of fire, stop leak if safe to do so. Exercise caution when fighting any chemical fires. Do not enter fire area without proper protective equipment including respiratory protection.

**Specific Hazards Arising from the Chemical:** Non-combustible substance; does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

**Hazardous Combustion Products:** Nitrous oxide (NO<sub>x</sub>), Ammonia

Refer to Section 10 for stability and reactivity information.

## 6. Accidental Release Measures

**Personal precautions, protective equipment, and emergency procedures:**

Ensure adequate ventilation. Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact. Wash contaminated clothes, keep unnecessary and unprotected personnel from entering area. Avoid breathing vapors.

**Environmental precautions and methods for containment and clean-up:**

Clean up spills with proper protection. Avoid dispersal of spilled material, runoff and contact with soil, waterways, drains and sewers. Use proper personal protection. Contain spill area with inert absorbent material. Sweep or shovel into properly labeled, suitable containers.

Refer to Section 12 for ecological information.

Refer to Section 8 for exposure controls and personal protection.

## 7. Handling and Storage

**Precautions for Handling:** Wear personal protection equipment. Do not handle until all safety precaution have been read and understood. Avoid contact during pregnancy/while nursing. Avoid prolonged exposure. Do not eat, drink, or smoke during use. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and when leaving work.

**Precautions for Storage:** Store in well-ventilated, cool areas. Keep container tightly closed and sealed until ready for use. Keep out of direct sunlight.

**Storage Conditions:**

Maintain a temperature between 5 – 30 °C

Store only in original container

Keep away from direct sunlight

Protect from freezing and physical damage

**Incompatible Products:** No information available

**Keep out of reach of children**

Refer to Section 10 for stability and reactivity incompatibilities.

## 8. Exposure Controls/Personal Protection

**Occupational exposure limits (U.S. OSHA):**

Acetic Acid (CAS 64-19-7):

PEL: 25 mg/m<sup>3</sup>

STEL: 15 ppm

TWA: 10 ppm

REL: 25 mg/m<sup>3</sup>

Ammonium Fluoride (CAS 12125-01-8):

PEL: 2.5 mg/m<sup>3</sup>

TWA 2.5 mg/m<sup>3</sup> (dust)

Nitric Acid (CAS 7697-37-2):

PEL: 5 mg/m<sup>3</sup>

STEL: 4 ppm

TWA: 2 ppm

**Biological limit values:**

Ammonium Fluoride (CAS 12125-01-8) – 3 mg/L

**Personal Protective Equipment:** Wear appropriate eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulation in 29 CFR 1910.144 or European Standard EN166.

**Skin and Body Protection:** Wear appropriate protective gloves and clothing to prevent skin exposure.  
**Respiratory Protection:** Not needed under normal use conditions. In areas of poor ventilation, wear appropriate mask.

**Other Information:** Do not eat, drink, or smoke during use. Handle in accordance with good industrial hygiene and safety practices.

Refer to Section 7 for handling and storage.

## 9. Physical and Chemical Properties

**Physical State:** Liquid

**Appearance:** Clear, colorless

**Odor:** Vinegar odor

**pH:** 2.5 – 3.0

**Freezing Point:** 32 °F (0 °C) estimated

**Initial Boiling Point:** 212 °F (100 °C) estimated

**Flashpoint:** Not applicable

**Evaporation Rate:** No information available

**Flammability:** Nonflammable

**Vapor Pressure/Density:**

**Specific Gravity/Density:** 1.0227 g/mL

**Solubility:** Soluble in water

**Partition Coefficient: n-octanol/water:** Not applicable

**Autoignition Temperature:** No information available

**Decomposition Temperature:** No information available

**Viscosity:** No information available

**Explosive Properties:** Not applicable

**Oxidizing Properties:** No information available

**Other:** No additional information available

## 10. Stability and Reactivity

**Reactivity:** None known, based on information available

**Chemical Stability:** Material is stable under normal conditions

**Possibility of hazardous reactions:** No dangerous reaction known under condition of normal use.

**Conditions to Avoid:** None under normal conditions

**Incompatible Materials:** None known

**Hazardous Decomposition Products:** Nitrous oxide (NO<sub>x</sub>), Ammonia

**Hazardous Polymerization:** Hazardous polymerization does not occur

## 11. Toxicological Information

**Acute Toxicity:**

P, Ext (CAS mixture):

Oral LD50 – Based on ATE data, the classification criteria are not met. ATE > 2,000 mg/kg  
Dermal LD50 – Based on ATE data, the classification criteria are not met. ATE > 2,000 mg/kg  
Vapor LC50 – Based on ATE data, the classification criteria are not met. ATE > 20 mg/L

**Acetic Acid (CAS 64-19-7):**

Oral LD50 – Rat 3,310 mg/kg  
Dermal LD50 – Rabbit 1,060 mg/kg  
Inhalation LC50 – Rat 11.4 mg/L, 4 hour

**Ammonium Nitrate (CAS 6484-52-5):**

Oral LD50 – Rat 4,500 mg/kg  
Inhalation LC50 – Rat > 88.8 mg/L, mg/L, 4 hours

**Ammonium Fluoride (CAS 12125-01-8):**

Oral LD50 – Rat 31 mg/kg  
Dermal LD50 – Frog 280 mg/kg  
Inhalation LC50 – Rat 1.6 mg/L, 6 hours

**Nitric Acid (CAS 7697-37-2):**

Oral LD50 – Human 430 mg/kg  
Dermal LD50 – Rat 150 mg/kg  
Inhalation LC50 – Mouse 244 mg/L, 30 minutes

**Information of likely routes of exposure:**

**Ingestion:** Based on available data, the classification criteria are not met.

**Inhalation:** May cause asthma symptoms or difficulty breathing if inhaled.

**Skin contact:** Causes skin irritation

**Eye contact:** Causes serious eye irritation

**Skin Corrosion/irritation:** Prolonged skin contact may cause irritation, seek medical assistance

**Serious eye damage/eye irritation:** Causes serious eye irritation, wash hands after handling.

**Respiratory or skin sensitization:** May cause respiratory effects. Avoid breathing fumes, mists, and vapors. If breathing becomes difficult, move to fresh air and consult medical assistance.

**Germ cell mutagenicity:** Suspected of damaging fertility of the unborn child.

**Carcinogenicity:** Ingredients not listed as carcinogens

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probably, possible, or confirmed human carcinogen by IARC, NTP, or OSHA.

**Reproductive toxicity:** Suspected of damaging fertility or the unborn child.

**Specific target organ toxicity – single exposure:** Causes damage to organs. Wear protective gloves and safety glasses. Do not eat, drink, or smoke while handling

**Specific target organ toxicity – repeated exposure:** Causes damage to organs through prolonged or repeated exposure. Wear protective gloves and safety glasses. Wash arms, hands, and face thoroughly after handling.

**Aspiration hazard:** No information available

**Chronic effects:** Prolonged inhalation may be harmful

**Signs and Symptoms of Exposure:** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## 12. Ecological Information

**Ecology General:** Contains a substance which causes risk of hazardous effects to the environment.

**Ecotoxicity:**

Acetic Acid (CAS 64-19-7):

LC50 – Carcinus maenas – 180 mg/L, 48 hours

EC50 – Elimia livescens – 460 mg/L 48 hours

Ammonium Nitrate (CAS 6484-52-5):

LC50 – Carp 65-85 mg/L, 48 hours

Nitric Acid (CAS 7697-37-2):

LC50 – Carcinus maenas 180 mg/L, 48 hours

**Persistence and Degradability:** No data is available on the degradability of this product

**Bioaccumulative Potential:** No data available

**Mobility in soil:** No data available

**Other adverse effects:** No data available

## 13. Disposal Considerations

**Disposal Instructions:** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dilute waste with large quantities of water and flush into sewer connected to wastewater treatment system in compliance with applicable laws and regulations. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/ regional/national/international regulations. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classifications.

**Local disposal regulations:** Not available

**Hazardous waste code:** Not regulated

**Waste from residues/unused products:** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see disposal instructions).

**Contaminated packaging:** Empty containers should be taken to an approved waste handling site for

recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transportation

**Department of Transportation (DOT):** In accordance with DOT, not regulated as dangerous goods

**Transportation of Dangerous Goods (TDG):** Not regulated as dangerous goods

**International Maritime Dangerous Goods (IMDG):** Not regulated as dangerous goods

**International Air Transport Association (IATA):** Not regulated as dangerous goods

## 15. Regulatory Information

**United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory:**  
Components of this mixture are listed, or excluded from listing

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302:** No components are extremely hazardous

**SARA 313:** No components are extremely hazardous

**SARA 311/312:**

Acute Health Hazard – Yes

Chronic Health Hazard – Yes

Fire Hazard – No

Sudden Release of Pressure Hazard – No

Reactive Hazard – No

**Clean Water Act (CWA):**

No information available

**Comprehensive Environmental Response Compensation and Liability Act (CERCLA): (40 CFR 302.4)**

Acetic Acid (CAS 64-19-7): LISTED

Ammonium Fluoride (CAS 12125-01-8): LISTED

Nitric Acid (CAS 7697-37-2): LISTED

**US Federal Regulation:** All components are on the US EPA TSCA Inventory list

**TSCA Section 12(b) Export Notification (40 CFR, Subpt. D)**

Not regulated.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not on regulatory list.

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List:** Not regulated

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**

Nitric Acid (CAS 7697-3702)



**Safe Drinking Water Act (SDWA):** Not regulated

**DEA Exempt Chemical Mixtures Code Number:** Not regulated

**Food and Drug Administration (FDA):** Not regulated

**Right-To-Know: US State Regulations**

Acetic Acid (CAS 64-19-7): LISTED – Massachusetts, Pennsylvania, Rhode Island

Ammonium Fluoride (CAS 12125-01-8): LISTED – Massachusetts, Pennsylvania, Rhode Island

Ammonium Nitrate (CAS 6484-52-2): LISTED – Massachusetts, Pennsylvania, Rhode Island

Nitric Acid (CAS 7697-37-2): LISTED – Massachusetts, New Jersey, Pennsylvania, Rhode Island

Water (CAS 7732-18-5): LISTED – Pennsylvania, New Jersey

**California Prop 65 Components:** California Safe Drinking Water and Toxic Enforcement Act of 1986

**International Inventories:**

Country/Region	Inventory Name	On Inventory*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
	Non-Domestic Substance List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substance (EINECS)	Yes
	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemical List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States	Toxic Substance Control Act (TSCA) Inventory	Yes

\* "Yes" indicates this product complies with the inventory requirements administered by governing country

\* "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country

## 16. Other Information

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**Disclaimer:**

The above information is believed to be accurate but Precision Planting makes no representation as to its accuracy. The above information does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product regarding appropriate safety precautions, use, storage, transportation, disposal and release. This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. It does not represent any guarantee of the properties of the product. Precision Planting makes no warranties of any kind as to the accuracy or completeness of the information contained herein. NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE CONCERNING THE INFORMATION HEREIN PROVIDED. The information should be used to make an independent determination, and, therefore, users are responsible to verify this data under their own operating conditions and methods. It is the responsibility of the user to ensure that

its activities comply with all applicable government requirements. Precision Planting and its Affiliates shall not be held liable for any injuries or damage resulting from handling, use, misuse, or contact with the product.

**End of Safety Data Sheet**