## Section 1. Product and Company Identification

Product Identification: 10% $NH_4H_2PO_4$ in 0.05% $HNO_3$
MSDS Number: MM-9003
Recommended Use: For Laboratory Use.
Company Identification: High-Purity Standards
P.O. Box 41727
Charleston, SC 29423
Telephone: (843) 767-7900
FAX: (843) 767-7906
In case of emergency call INFOTRAC: 800-535-5053

## Section 2. Hazard Identification

**Classification:**
None

**Labeling:**
**Symbol:** None
**Signal Word:** None
**Hazard Statement:** None
**Precautionary Statement:** None

## Section 3. Composition

| Component | CAS/EINECS Registry # | Percent Concentration |
|---|---|---|
| Ammonium Dihydrogen Phosphate ($NH_4H_2PO_4$) | 7722-76-1/231-764-5 | 1 |
| Nitric Acid ($HNO_3$) | 7697-37-2/231-714-2 | 0.05 |
| Water, deionized | 7732-18-5/231-791-2 | Balance |

## Section 4. First Aid Measures

Emergency Overview: May cause irritation. Wash areas of contact with water.
Skin/eye Contact: May cause slight irritation. Remove contaminated shoes and clothing. Flush contaminated area with plenty of water for at least 15 minutes. Call a physician if irritation develops.
Inhalation: Not likely to be hazardous by inhalation.
Ingestion: May cause irritation to stomach if ingested in large quantities. Rinse mouth with water. Dilute with water or milk.

## Section 5. Fire Fighting Measures

Fire & Explosion hazards: While nitric acid is not combustible, it is a strong oxidizing agent that can react with combustible materials; however, it is present in limited quantities in this solution. $NO_x$ compounds can be released in case of fire.
Extinguishing Media: Use any extinguishing media that is suitable for the surrounding area. Use a water spray to dilute nitric acid and to absorb liberated nitrogen oxides.

Specific Methods: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

## Section 6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Do not allow to enter drainage systems or water ways. Dike area and dilute spill with water and neutralize with soda ash, limestone, etc. Place the neutralized material into containers suitable for eventual disposal, reclamation, or destruction. Always dispose of in accordance with local regulations.

## Section 7. Handling and Storage

Store in a cool, dry, ventilated storage area with acid resistant floors and good drainage. Keep out of direct sunlight and away from heat, water, and incompatible materials. When diluting, the acid should always be added slowly to water and in small amounts. Refer to Section 8 for personal handling instructions.

## Section 8. Exposure Controls and Personal Protection

Engineering Controls: Provide exhaust ventilation or other engineering controls to keep any buildup of airborne contaminants below their respective threshold limit value. Ensure the availability of eyewash stations and safety showers.

Personal Protection: Wear proper gloves, safety glasses with side shields, lab coat/apron.

**Exposure Limits:**

| Component | ACGIH TLV | OSHA PEL |
|---|---|---|
| Ammonium Dihydrogen Phosphate | Not Available | Not Available |
| Nitric Acid ($HNO_3$) | 2 mg/kg | 5 $mg/m^3$ |
| Water, deionized | Not Available | Not Available |

## Section 9. Physical and Chemical Properties

Physical State: Liquid
Color: Clear, colorless
Odor: Odorless to a faint pungent odor
Odor threshold: None
pH: 3-4
Melting point: N/A
Freezing Point: N/A
Boiling Point: Approximately 100°C
Flash point: N/A
Evaporation rate: N/A
Flammability: N/A
Explosion limits: N/A
Vapor Pressure (mm): N/A
Vapor Density (air+1): N/A
Relative density: ($H_2O$ = 1): Approximately 1.0
Solubility in $H_2O$: Complete

Auto ignition temperature: N/A
Decomposition temperature: N/A
Molecular Weight: 115.03

## Section 10. Stability and Reactivity

Stability Indicator: Decomposes slowly to release oxygen.
Conditions to Avoid: Metals, chlorine, organic materials, strong alkali, cyanides.
Incompatibles: Strong reducing agents.
Hazardous Decomposition Products: $NO_x$ compounds including nitric oxide (NO), nitrogen dioxide ($NO_2$), nitrous oxide ($N_2O$) and nitric acid mist or vapor.
Hazardous Polymerization: Will not occur.

## Section 11. Toxicological Information

May affect skin, mucous membranes and eyes. Swallowing may lead to a negative effect on mouth and throat and to the risk of perforation or the corrosion of esophagus and stomach.
**RTECS#**
$HNO_3$-QU5775000

**Toxicity Data:**
$LD_{LO}$ Oral, Human: (Nitric Acid) 430 mg/kg

## Section 12. Ecological Information

Ecotoxicological information: Do not allow material to reach ground water, water bodies, or sewage system.

## Section 13. Disposal Considerations

General: Follow Federal, state and local regulations for waste.

## Section 14. Transport Information

D.O.T. Classification: Not Hazardous by DOT regulations (based on concentration of acid).

## Section 15. Regulations (Not meant to be all inclusive-selected regulation listed)

TSCA Status: Components of this solution are listed on the TSCA Inventory.
RCRA Status: No
SARA: Subject to the reporting requirements of Section 313 of SARA Title III and of 40 CFR 372
Risk Phrases: R36/38 Irritating to eyes and skin
Safety Phrases: S36/37/39 Wear suitable protective clothing, gloves and eye/face protection
WHMIS Information (Canada): Not controlled

## Section 16. Other Information

HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel only. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The SDS was prepared carefully and represents

the best data currently available to us; however, HPS does not certify the data on the SDS. Certified values for this material are given only on the Certificate of Analysis.

Theodore C. Rains, Ph.D.