

Material Safety Data Sheet

Section 1. Product and Company Identification

Product Identification: Simulated Rainwater Level 2
 MSDS Number: SR-2
 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. Chemical Composition

Component	CAS/EINECS Registry #	Percent Concentration	ACGIH TLV	OSHA PEL
Ammonium Sulfate ((NH ₄) ₂ SO ₄)	7783-20-2/ 231-984-1	<0.001	Not Available	Not Available
Calcium Chloride-Hydrate (CaCl ₂ · xH ₂ O)	22691-02-7/ 233-140-8	<0.001	Not Available	Not Available
Hydrochloric Acid (HCl)	7647-01-0/ 231-595-7	<0.001	C 5ppm C 7.5 mg/m ³	C 5ppm C 7 mg/m ³
Magnesium Sulfate Heptahydrate (MgSO ₄ · 7H ₂ O)	10034-99-8/ 231-298-2	<0.001	Not Available	Not Available
Nitric Acid (HNO ₃)	7697-37-2/ 231-714-2	<0.001	2 mg/kg	5 mg/m ³
Potassium Nitrate (KNO ₃)	7757-79-1/ 231-818-8	<0.001	Not Available	Not Available
Sodium Fluoride (NaF)	7681-49-4/ 231-667-8	<0.001	2.5 mg/m ³ (as F)	2.5 mg/m ³ (as F)
Sodium Nitrate (NaNO ₃)	7631-99-4/ 231-554-3	<0.001	Not Available	Not Available
Sulfuric Acid (H ₂ SO ₄)	7664-93-9/ 231-639-5	<0.001	5 mg/m ³	1 mg/m ³
Water, deionized	7732-18-5/ 231-791-2	Balance	Not Available	Not Available

Section 3. Hazard Identification

Emergency Overview: May cause eye and skin irritation. May cause digestive tract irritation.
 Wash areas of contact with plenty of water.
 Target Organs: None known at this concentration.
 Skin/eye Contact: May cause slight irritation, redness, and pain.
 Inhalation: Not expected to be a health hazard at this concentration.
 Ingestion: May cause irritation to the digestion tract.

Section 4. First Aid Measures

Inhalation: Remove to fresh air.

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Skin/eye Contact: Remove contaminated shoes and clothing. Flush contaminated area with plenty of water for at least 15 minutes. Call a physician if irritation develops.

Ingestion: Give several glasses of water to dilute. If large amounts were swallowed, get medical advice.

Section 5. Fire Fighting Measures

Fire & Explosion Hazards: Not considered to be a fire or explosion hazard.

Extinguishing Media: Use any means suitable for extinguishing surrounding fire.

Specific Methods: Firefighters should wear proper protective equipment and breathing apparatus for surrounding fire.

Section 6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Dilute with water and mop up or absorb spills with absorbent (vermiculite, sand, fuller's earth) and place in plastic bags for later disposal. Always dispose of in accordance with local regulations.

Section 7. Handling and Storage

Store in a cool, dry, ventilated storage area. Keep away from incompatible materials. Keep container tightly sealed. Refer to Section 8 for personal handling instructions..

Section 8. Exposure Controls and Personal Protection

Engineering Controls: No specific controls are needed.

Respiratory Protection: Normal room ventilation is adequate.

Personal Protection: Wear proper gloves, safety glasses with side shields, lab coat/apron. Do not wear contact lenses when working with chemicals.

Section 9. Physical and Chemical Properties

Molecular Weight: N/A

Boiling Point: Approximately 100°C

Freezing Point: N/A

Vapor Pressure (mm): N/A

Vapor Density (air+1): N/A

Specific Gravity (H₂O = 1): Approximately 1.0

Solubility in H₂O: Complete

Appearance: Clear, colorless liquid

Odor: Odorless

pH: 3.6

Section 10. Stability and Reactivity

Stability Indicator: YES

Conditions to Avoid: None reported.

Hazardous Decomposition Products: None reported for this concentration.

Hazardous Polymerization: Will not occur.

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Section 11. Toxicological Information

RTECS #:

HCl- MW4025000 HNO₃- QU5775000 H₂SO₄- WS5600000 KNO₃- TT3700000
NaF- WB0350000 NaNO₃-WC5600000 NH₄Cl- BP4550000 (NH₄)₂SO₄- BS4500000
MgSO₄·7H₂O- OM4508000

Toxicity Data:

LD₅₀ Oral, Rat: ((NH₄)₂SO₄) 2840 mg/kg; LD₅₀ Oral, Rabbit: (HCl) 900 mg/kg, LC_{LO}, inhalation, human: (HCl) 3000 ppm/5 minutes: No toxic effects noted. LD_{LO} Oral, Human: (HNO₃) 430 mg/kg; LD₅₀ Oral, Rat: (H₂SO₄) 2140 mg/kg; LD₅₀ Oral, Rat: (KNO₃) 3750 mg/kg; LD_{LO} Dermal, Mouse: (NaF)~300 mg/kg; LD₅₀ Oral, Rat: (NaNO₃) 1267 mg/kg; LD₅₀ Oral, Rat: (NH₄Cl) 1650 mg/kg.

Section 12. Ecological Information

Ecotoxicological information: This product does not contain components at concentrations that are expected to be toxic to aquatic life.

Section 13. Disposal Considerations

General: Follow federal, state and local regulations for disposal.

Section 14. Transport Information

D.O.T. Classification: Not hazardous by DOT.

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

TSCA Status: The components of this solution are listed on the TSCA Inventory.

RCRA Status: No

SARA: No

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 applicable at this concentration.

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 rest solely with the buyer and/or user. The MSDS was prepared carefully and represents the best data currently available to us; however, HPS does not certify the data on the MSDS. Certified values for this material are given only on the Certificate of Analysis.

Theodore C. Rains, Ph.D.