

Material Safety Data Sheet

Section 1. Product and Company Identification

Product Identification: DWPS Solution B
MSDS Number: DWPS Solution B
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
Mercury	7439-97-6/ 231-106-7	0.002	0.05 mg/m ³	0.025 mg/m ³
Nitric Acid	7697-37-2/ 231-714-2	2	2 mg/kg	5 mg/m ³
Water, deionized	7732-18-5/ 231-791-2	Balance	Not Available	Not Available

Section 3. Hazard Identification

Emergency Overview: Mildly corrosive and toxic. May cause irritation to areas of contact. Wash areas of contact with water for at least 15 minutes. If ingested, do not induce vomiting. Dilute with water and call a physician.

Target Organs: Eyes, skin, respiratory system, teeth, kidneys, and nervous system.

Skin/eye Contact: Liquid may cause burns to skin and eyes. Mercury can be absorbed through the skin in harmful amounts.

Inhalation: May cause irritation or burns to respiratory tract. Aspiration may lead to pulmonary edema.

Ingestion: May cause nausea, vomiting, and diarrhea.

Section 4. First Aid Measures

Inhalation: Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen.

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: Rinse mouth with water. If swallowed, do NOT induce vomiting. If conscious give large quantities of water or milk. CALL A PHYSICIAN.

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. NO_x compounds can be released in event 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.

Material Safety Data Sheet No. DWPS Solution B	Date: July 13, 2006	
DWPS Solution B	Rev.: New	Page 2 of 3

Section 6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Cover the spill with sodium bicarbonate or a soda ash-slaked lime mixture (50:50) to neutralize the acid. 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: No specific controls are needed. Normal room ventilation is adequate.
 Respiratory Protection: Normal room ventilation is adequate.
 Personal Protection: Wear proper gloves, safety glasses with side shields, lab coat/apron.

Section 9. Physical and Chemical Properties

Form: Liquid
 Molecular Weight: 200.59 (Hg)
 Boiling Point: ~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 to a faint pungent odor
 pH: <1

Section 10. Stability and Reactivity

Stability Indicator: YES
 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 (NO₂), nitrous oxide (N₂O) 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.

Toxicity Data:

HNO₃-RTECS# QU5775000

Hg-RTECS# OV4550000

Material Safety Data Sheet No. DWPS Solution B	Date: July 13, 2006	
DWPS Solution B	Rev.: New	Page 3 of 3

LD_{LO} Oral, Human: (Nitric Acid) 430 mg/kg
 TC_{LO} Inhalation, Rat: (Mercury) 1 mg/m³/24hrs/5wks continuous.

Section 12. Ecological Information

Ecotoxicological information: Do not allow material to reach ground water, water bodies, or sewage system. Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

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: 7439-97-6 (Mercury)

SARA: Subject to the reporting requirements of Section 313 of SARA Title III and of 40 CFR 372

Risk Phrases: R20/21/22, 33 Harmful by inhalation, skin contact, or if swallowed. Danger of cumulative effects.

Safety Phrases: S36/37/39 Wear suitable protective clothing, gloves and eye/face protection

WHMIS Information (Canada): E: Corrosive

D-2B: Poisonous and Infectious Material

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.