

Material Safety Data Sheet

Section 1. Product and Company Identification

Product Identification: CCV-3
MSDS Number: CCV-3
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
Gold	7440-57-5/231-165-9	0.01	Not Available	Not Available
Palladium	7440-05-3/231-115-6	0.01	Not Available	Not Available
Platinum	7440-06-4/231-116-1	0.01	1 mg/m ³	1 mg/m ³
Hydrochloric Acid	7647-01-0/231-595-7	2	C 5ppm C 7 mg/m ³	C 5ppm C 7 mg/m ³
Water, deionized	7732-18-5/231-791-2	Balance	Not Available	Not Available

Section 3. Hazard Identification

Emergency Overview: Mildly corrosive. 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.

Skin/eye Contact: Liquid may cause burns to skin and eyes.

Inhalation: May cause coughing, choking, irritation and inflammation of the nose, throat and upper respiratory tract.

Ingestion: May cause burns of the mouth, throat, esophagus and gastrointestinal tract, 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 or milk of magnesia. CALL A PHYSICIAN in all cases.

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Section 5. Fire Fighting Measures

Fire & Explosion hazards: Hydrochloric acid is a negligible fire hazard when exposed to heat and/or flames. Hydrochloric acid may react with the evolution of heat on contact with water; the acid may release toxic, corrosive, flammable, or explosive gases.

Extinguishing Media: Use regular dry chemical, carbon dioxide, water, or regular foam.

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. Remove source of ignition if hydrogen is a hazard. 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

Molecular Weight: N/A

Boiling Point: ~100°C

Freezing Point: N/A

Vapor Pressure (mm): N/A

Vapor Density (air+1): N/A

Specific Gravity (H₂O = 1): N/A

Solubility in H₂O: Complete

Appearance: Clear, yellow colored liquid

Odor: Acrid

pH: <1

Section 10. Stability and Reactivity

Stability Indicator: YES

Conditions to Avoid: Metals, hydroxides, carbonates, cyanides, sulfides, sulfites, formaldehyde.

Incompatibles: Strong oxidizing agents.

Hazardous Decomposition Products: HCl; fumes of Hydrogen Chloride.

Hazardous Polymerization: Will not polymerize.

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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.

HCl-RTECS# MW4025000

Toxicity Data:

LD₅₀ Oral, Rabbit: (HCl) 900 mg/kg; LC_{LO} Inhalation, Human: (HCl) 3000 ppm/5 minutes; LD₅₀, Oral, Rat: (Palladium Chloride) 2704 mg/kg.

Section 12. Ecological Information

Ecotoxicological information: Hydrogen chloride has slight acute and chronic toxicity to aquatic life.

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: All components of this solution are listed on the TSCA Inventory or are mixtures (hydrates) of items listed on the TSCA Inventory.

RCRA Status: No

SARA: Section 302 (Extremely Hazardous Substances) No
Section 313 No

Risk Phrases: R20, R21, R22 Harmful by inhalation, skin contact, or if swallowed.

Safety Phrases: S36, S37, S39 Wear suitable protective clothing, gloves and eye protection

WHMIS Information (Canada): E: Corrosive

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.