

# SAFETY DATA SHEET

Issue Date 06-Mar-2026  
Revision Number 1.01

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**

**Product identifier**

**Product Name** Palladium Standard Solution (Pd 1000)[CRM]  
**Other means of identification**  
**Product Code(s)** 167-29641

**Recommended use of the chemical and restrictions on use**

**Recommended Use** For research use only.  
**Uses advised against** Seek expert judgment when using for purposes other than those recommended.

**Details of the supplier of the safety data sheet**

<b>Manufacturer Address</b>	<b>Distributor</b>
FUJIFILM Wako Pure Chemical Corporation	FUJIFILM Biosciences Inc.
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**2. HAZARDS IDENTIFICATION**

**GHS classification**

**Classification of the substance or mixture**

<b>Corrosive to metals</b>	Category 1
<b>Acute toxicity - Oral</b>	Category 4
<b>Skin corrosion/irritation</b>	Category 1
<b>Serious eye damage/eye irritation</b>	Category 1
<b>Respiratory sensitization</b>	Category 1
<b>Skin sensitization</b>	Category 1
<b>Specific target organ toxicity (single exposure)</b>	Category 2
<b>Category 2</b> respiratory system	
<b>Specific target organ toxicity (repeated exposure)</b>	Category 2
<b>Category 2</b> respiratory system, teeth	
<b>Acute aquatic toxicity</b>	Category 2

**Pictograms**



**Signal word**

Danger

**Hazard statements**

- H290 - May be corrosive to metals
- H314 - Causes severe skin burns and eye damage
- H318 - Causes serious eye damage
- H302 - Harmful if swallowed
- H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H317 - May cause an allergic skin reaction
- H401 - Toxic to aquatic life
- H371 - May cause damage to the following organs: respiratory system

H373 - May cause damage to the following organs through prolonged or repeated exposure: respiratory system, teeth

**Precautionary statements-(Prevention)**

Wash face, hands and any exposed skin thoroughly after handling Do not eat, drink or smoke when using this product Do not breathe dust/fume/gas/mist/vapors/spray Wear protective gloves/protective clothing/eye protection/face protection In case of inadequate ventilation wear respiratory protection Contaminated work clothing should not be allowed out of the workplace Avoid release to the environment Keep only in original container

**Precautionary statements-(Response)**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Immediately call a POISON CENTER or doctor/physician

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower Wash contaminated clothing before reuse If skin irritation or rash occurs: Get medical advice/attention

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell Rinse mouth Do NOT induce vomiting

Absorb spillage to prevent material damage

**Precautionary statements-(Storage)**

Store locked up Store in corrosive resistant/ container with a resistant inner liner

**Precautionary statements-(Disposal)**

Dispose of contents/container to an approved waste disposal plant

**Others**

**Other hazards** Not available

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Single Substance or Mixture** Mixture

Chemical Name	Molecular weight	CAS RN	Weight-%
Water	18.02	7732-18-5	94.84
Hydrogen Chloride	36.46	7647-01-0	5.0
Palladium(II) chloride	177.33	7647-10-1	0.16

**Impurities and/or Additives:** Not applicable

### 4. FIRST AID MEASURES

**First aid measures**

**Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

**Skin contact** Wash skin with soap and water.

**Inhalation** Remove to fresh air.

**Ingestion** Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Do not induce vomiting without medical advice.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** No information available.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### **Specific hazards arising from the chemical**

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

#### **Explosion data**

**Sensitivity to Mechanical** none.

#### **Impact**

**Sensitivity to Static Discharge** none.

#### **Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

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

**Personal precautions, protective equipment and emergency procedures** Ensure adequate ventilation, especially in confined areas.

#### **Environmental precautions**

**Environmental precautions** See Section 12 for additional ecological information.

#### **Methods and material for containment and cleaning up**

**Methods and material for containment and cleaning up** Absorb dry sand, earth, sawdust and the waste. Collect empty container that can be sealed.

**Methods for cleaning up** Pick up and transfer to properly labeled containers.

## 7. HANDLING AND STORAGE

#### **Precautions for safe handling**

**Technical measures** Avoid contact with alkaline substances. Avoid contact with metal.

**Protective measures** Handle in accordance with good industrial hygiene and safety practice.

#### **Conditions for safe storage, including any incompatibilities**

**Storage conditions** Store away from sunlight in well-ventilated place at room temperature (under 25 °C). Keep container tightly closed.

**Packaging materials** Polyethylene.

**Incompatible materials** alkaline substances. Metals.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### **Engineering controls**

In case of indoor workplace, seal the source or use a local exhaust system. Provide the safety shower facility, and hand- and eye-wash facility. And display their position clearly.

#### **Exposure limits**

<b>Chemical Name</b>	<b>ACGIH</b>	<b>OSHA PEL</b>	<b>NIOSH IDLH</b>
Hydrogen Chloride 7647-01-0	Ceiling: 2 ppm	(vacated) Ceiling: 5 ppm (vacated) Ceiling: 7 mg/m <sup>3</sup> Ceiling: 5 ppm	IDLH: 50 ppm Ceiling: 5 ppm Ceiling: 7 mg/m <sup>3</sup>

Ceiling: 7 mg/m<sup>3</sup>**Personal protective equipment**

<b>Respiratory protection</b>	Gas mask for acidic gas ( JIS T 8152 )
<b>Hand protection</b>	chemical protective gloves ( JIS T 8116 )
<b>Eye protection</b>	protective eyeglasses or chemical safety goggles (JIS T 8147)
<b>Skin and body protection</b>	Long-sleeved work clothes

**General hygiene considerations**

Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Form**

<b>Color</b>	yellow brown
<b>Turbidity</b>	clear
<b>Appearance</b>	liquid
<b>Odor</b>	no data available
<b>pH</b>	Strongly acidic
<b>Melting point/freezing point</b>	no data available
<b>Boiling point, initial boiling point and boiling range</b>	no data available
<b>Flash point</b>	no data available
<b>Evaporation rate:</b>	no data available
<b>Flammability (solid, gas):</b>	no data available
<b>Upper/lower flammability or explosive limits</b>	
<b>Upper:</b>	no data available
<b>Lower:</b>	no data available
<b>Vapour pressure</b>	no data available
<b>Vapour density</b>	no data available
<b>Specific Gravity / Relative density</b>	no data available
<b>Solubilities</b>	
<b>n-Octanol/water partition coefficient:(log Pow)</b>	no data available
<b>Auto-ignition temperature:</b>	no data available
<b>Decomposition temperature:</b>	no data available
<b>Viscosity (coefficient of viscosity)</b>	no data available
<b>Dynamic viscosity</b>	no data available
<b>Particle characteristics</b>	no data available

## 10. STABILITY AND REACTIVITY

**Stability**

<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Reactivity</b>	no data available
<b>Hazardous reactions</b>	Corrodes metals to generate hydrogen gas.
<b>Conditions to avoid</b>	Extremes of temperature and direct sunlight
<b>Incompatible materials</b>	alkaline substances, Metals
<b>Hazardous decomposition products</b>	Halides, Metal oxides

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
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Hydrogen Chloride	238 - 277 mg/kg ( Rat )	> 5010 mg/kg ( Rabbit )	1411 ppm ( Rat ) 4 h
Palladium(II) chloride	2704 mg/kg ( Rat )	N/A	N/A

Chemical Name	Acute toxicity -oral- source information	Acute toxicity -dermal- source information	Acute toxicity -inhalation gas- source information
Hydrogen Chloride	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Chemical Name	Acute toxicity -inhalation vapor- source information	Acute toxicity -inhalation dust- source information	Acute toxicity -inhalation mist- source information
Hydrogen Chloride	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

**Skin irritation/corrosion**

Chemical Name	Skin corrosion/irritation source information
Hydrogen Chloride	Based on the NITE GHS classification results.

**Serious eye damage/ irritation**

Chemical Name	Serious eye damage/irritation source information
Hydrogen Chloride	Based on the NITE GHS classification results.

**Respiratory or skin sensitization**

Chemical Name	Respiratory or Skin sensitization source information
Hydrogen Chloride	Based on the NITE GHS classification results.

**Reproductive cell mutagenicity**

Chemical Name	germ cell mutagenicity source information
Hydrogen Chloride	Based on the NITE GHS classification results.

**Carcinogenicity**

Chemical Name	Carcinogenicity source information
Hydrogen Chloride	Based on the NITE GHS classification results.

Chemical Name	NTP	IARC	ACGIH	JSOH
Hydrogen Chloride 7647-01-0	N/A	Group 3	N/A	N/A

**Reproductive toxicity**

Chemical Name	Reproductive toxicity source information
Hydrogen Chloride	Based on the NITE GHS classification results.

**STOT-single exposure**

Chemical Name	STOT -single exposure- source information
Hydrogen Chloride	Based on the NITE GHS classification results.

**STOT-repeated exposure**

Chemical Name	STOT -repeated exposure- source information
Hydrogen Chloride	Based on the NITE GHS classification results.

**Aspiration hazard**

Chemical Name	Aspiration Hazard source information
Hydrogen Chloride	Based on the NITE GHS classification results.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Hydrogen Chloride 7647-01-0	ErC50 : 0.492 mg/L Raphidocelis 72 h (pH : 5.3)	LC50 : Cyprinus carpio 4.92 mg/L 96 h (pH : 4.3)	N/A	EC50 : Daphnia magna 0.492 mg/L 48 h (pH : 5.3)

**Persistence and degradability**

No information available

**Bioaccumulative potential**

No information available

**Mobility**

no data available

**Mobility in soil**

No information available

**Other Data**

No information available

**13. DISPOSAL CONSIDERATIONS****Waste treatment methods**

**Disposal of wastes** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Precautionary including method of disposing contaminated packaging** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**14. TRANSPORT INFORMATION****DOT**

**UN/ID No** UN1789  
**Proper shipping name:** Hydrochloric acid  
**UN classification** 8  
**Subsidiary hazard class**  
**Packing group** III  
**Marine pollutant** Not applicable

**IATA**

**UN/ID No** UN1789  
**Proper shipping name:** Hydrochloric acid  
**UN classification** 8  
**Subsidiary hazard class**  
**Packing group** III  
**Environmentally Hazardous Substance** Not applicable

**IMDG**

**UN/ID No** UN1789  
**Proper shipping name:** Hydrochloric acid  
**UN classification** 8  
**Subsidiary hazard class**  
**Packing group** III  
**Marine pollutant (Sea)** Not applicable

**15. REGULATORY INFORMATION****US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS RN	Weight-%	SARA 313 - Threshold Values %
Water - 7732-18-5	7732-18-5	94.84	N/A
Hydrogen Chloride - 7647-01-0	7647-01-0	5.0	1.0

Palladium(II) chloride - 7647-10-1	7647-10-1	0.16	N/A
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**SARA 311/312 Hazard Categories**

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Hydrogen Chloride 7647-01-0	5000 lb	N/A	N/A	X

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Hydrogen Chloride 7647-01-0	5000 lb	5000 lb	RQ 5000 lb final RQ RQ 2270 kg final RQ

**US State Regulations****California Proposition 65**

This product does not contain any chemicals regulated by Proposition 65

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	N/A	N/A	X
Hydrogen Chloride 7647-01-0	X	X	X

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**16. OTHER INFORMATION**

Issue Date 06-Mar-2026

**Revision Note**

No information available

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet