

# OTTO CHEMIE PVT LTD

An ISO 9001 : 2015 & GMP Certified Company  
101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate,  
Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841  
Email : [info@ottokemi.com](mailto:info@ottokemi.com) Web : [www.ottokemi.com](http://www.ottokemi.com)

Creation Date: 10-03-2025

Revision Date: 29-07-2030

## MATERIAL SAFETY DATA SHEET (MSDS)

### SECTION 1. Product identifiers

Product name: Palladium AAS standard solution 1000 mg/L Pd in diluted HCl traceable to NIST  
Product Code: P 0052

1.2. Relevant identified uses of the substance or mixture and uses advised against  
Use : Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet

Company identification

OTTO CHEMIE PVT LTD

101, Aarkay Ruby Industrial Estate(1B), Opp Shree Narayan Industrial Estate,  
Chinchpada, Vasai East, Waliv, Maharashtra 401208.

Email [info@ottokemi.com](mailto:info@ottokemi.com)

1.4. Emergency telephone number

Phone no. : + 91 22 2207 0099 (9:00am - 6:00 pm).

### SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Corrosive to Metals, (Category 1)

Skin irritation, (Category 2)

Serious eye damage, (Category 1)

Long-term (chronic) aquatic hazard, (Category 3) lasting effects.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal Word

Hazard Statements

H290

H315

H318

H412

Precautionary Statements

P234

P264

P273

P280

P302 + P352

P305 + P351 + P338

Supplemental Hazard

Statements

Reduced Labeling (<= 125 ml)

Pictogram

Signal Word

Hazard Statements

H318

H412

Precautionary Statements

P305 + P351 + P338

H290: May be corrosive to metals.

H315: Causes skin irritation.

H318: Causes serious eye damage.

H412: Harmful to aquatic life with long

Danger

May be corrosive to metals.

Causes skin irritation.

Causes serious eye damage.

Harmful to aquatic life with long lasting effects.

Keep only in original packaging.

Wash skin thoroughly after handling.

Avoid release to the environment.

Wear protective gloves/ eye protection/ face protection.

IF ON SKIN: Wash with plenty of water.

IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

none

Danger

Causes serious eye damage.

Harmful to aquatic life with long lasting effects.

IF IN EYES: Rinse cautiously with water for several minutes.

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Remove contact lenses, if present and easy to do. Continue rinsing.  
none

## Supplemental Hazard Statements

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

#### Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

#### Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Component	Classification	Concentration
Palladium nitrate (Palladium matrix modifier)		
EC-No. 233-265-8	Ox. Sol. 1; Met. Corr. 1; Acute Tox. 4; Skin Corr. 1B; Eye Dam. 1; Aquatic Acute 1; Aquatic Chronic 1; H271, H290, H302, H314, H318, H400, H410 M-Factor - Aquatic Acute: 10 - Aquatic Chronic: 10	>= 0,1 - < 0,25 %

\*A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, or the annual tonnage does not require a registration.

For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

Show this material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.

Remove contact lenses.

#### If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

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

#### Unsuitable extinguishing media

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For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Nitrogen oxides (NOx)

Not combustible.

Fire may cause evolution of:

corrosive vapours

Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent and neutralising material (e.g. Chemizorb® H<sup>+</sup>, Merck Art. No. 101595). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

## SECTION 7: Handling and storage

7.1 Precautions for safe handling

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

No metal or light-weight-metal containers. No metal containers.

Tightly closed.

Recommended storage temperature see product label.

Storage class

Storage class (TRGS 510): 8B: Non-combustible, corrosive hazardous materials

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure controls

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

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Material tested:KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

Body Protection  
protective clothing

Respiratory protection

Recommended Filter type: filter E-(P2)

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Physical state

liquid

b) Color

yellow

c) Odor

odorless

d) Melting

No data available

point/freezing point

No data available

e) Initial boiling point

No data available

and boiling range

No data available

f) Flammability (solid,

No data available

gas)

No data available

g) Upper/lower

No data available

flammability or

explosive limits

h) Flash point

Not applicable

i) Autoignition

Not applicable

temperature

j) Decomposition

No data available

temperature

k) pH

ca.0,5 at 20 °C

l) Viscosity

Viscosity, kinematic: No data available

Viscosity, dynamic: No data available

at 20 °C soluble

No data available

m) Water solubility

n) Partition coefficient:

n-octanol/water

o) Vapor pressure

No data available

p) Density

ca.1,02 g/cm<sup>3</sup> at 20 °C

Relative density

No data available

q) Relative vapor

No data available

density

r) Particle

No data available

characteristics

s) Explosive properties

Not classified as explosive.

t) Oxidizing properties

none

### 9.2 Other safety information

No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

Generates dangerous gases or fumes in contact with:

Metals

metal alloys

Release of:

nitrous gases

Hydrogen

increased reactivity with:

oxidisable substances

organic solvent

Alkali metals

Alkaline earth metals

Ammonia

alkalines

Acids

Violent reactions possible with:

The generally known reaction partners of water.

Violent reactions possible with:

The generally known reaction partners of water.

### 10.4 Conditions to avoid

no information available

### 10.5 Incompatible materials

Metals, metal alloys Gives off hydrogen by reaction with metals. Metals

### 10.6 Hazardous decomposition products

In the event of fire: see section 5

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Toxicity to Animals:

Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg/kg

Inhalation LC50 Rat: > 50mg/L.

Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified None. by NTP, None. by OSHA, None. by NIOSH.

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of inhalation (lung irritant).

Special Remarks on Toxicity

to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

Mixture

No data available

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties

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according to REACH Article 57(f) or Commission  
Delegated regulation (EU) 2017/2100 or Commission  
Regulation (EU) 2018/605 at levels of 0.1% or higher.

## 12.7 Other adverse effects

Caustic even in diluted form.

Hazard for drinking water supplies.

Depending on the concentration, phosphorus and/or nitrogen compounds may contribute to the eutrophication of drinking- water supplies.

Discharge into the environment must be avoided.

Components

nitric acid

No data available

Palladium nitrate (Palladium matrix modifier)

Toxicity to fish semi-static test LC50 - *Oncorhynchus mykiss* (rainbow trout) -

0,306 mg/l - 96 h

(OECD Test Guideline 203)

Remarks: The value is given in analogy to the following

substances: diamminedichloropalladium

Toxicity to daphnia

and other aquatic

invertebrates

static test EC50 - *Daphnia magna* (Water flea) - 0,069 mg/l -

48 h

(OECD Test Guideline 202)

Remarks: The value is given in analogy to the following

substances: diamminedichloropalladium

Toxicity to algae static test ErC50 - *Pseudokirchneriella subcapitata* - 0,058 mg/l

- 72 h

(OECD Test Guideline 201)

Remarks: The value is given in analogy to the following

substances: diamminedichloropalladium

static test NOEC - *Pseudokirchneriella subcapitata* - 0,002 mg/l

- 72 h

(OECD Test Guideline 201)

Remarks: The value is given in analogy to the following

substances: diamminedichloropalladium

Toxicity to bacteria static test EC50 - activated sludge - 61 mg/l - 3 h

(OECD Test Guideline 209)

Remarks: The value is given in analogy to the following

substances: diamminedichloropalladium

static test NOEC - activated sludge - 18 mg/l - 3 h

(OECD Test Guideline 209)

Remarks: The value is given in analogy to the following

substances: diamminedichloropalladium

Toxicity to daphnia

and other aquatic

invertebrates(Chronic

toxicity)

semi-static test NOEC - *Daphnia magna* (Water flea) - 0,028

mg/l - 21 d

(OECD Test Guideline 211)

Remarks: (in analogy to similar products)

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

No data available

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## SECTION 14: Transport information

14.1 UN number		
ADR/RID: 3264	IMDG: 3264	IATA: 3264
14.2 UN proper shipping name		
ADR/RID : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (nitric acid)		
IMDG : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (nitric acid)		
IATA : Corrosive liquid, acidic, inorganic, n.o.s. (nitric acid, 3%)		
14.3 Transport hazard class(es)		
ADR/RID: 8	IMDG: 8	IATA: 8
14.4 Packaging group		
ADR/RID: III	IMDG: III	IATA: III
14.5 Environmental hazards		
ADR/RID: no	IMDG Marine pollutant: no	IATA: no
14.6 Special precautions for user		
Tunnel restriction code : (E)		
Further information : No data available		

## SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture  
This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.  
Authorisations and/or restrictions on use  
Regulation (EU) 2019/1148 on the marketing and use of explosives precursors  
: nitric acid  
Other regulations  
Take note of Dir 94/33/EC on the protection of young people at work.  
15.2 Chemical Safety Assessment  
For this product a chemical safety assessment was not carried out

## SECTION 16: Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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