

**Section 1.- Identification of the substance/mixture and of the company**

- **Identification of the product:** Palladium nanoparticles solution
- **Chemical family:** Palladium and water
- **Product name:** DRP-PDNP-COL  
DRP-PDNP-PUR
- **Use of the substance/preparation:** Research use only
- **Manufacturer/supplier identification:** Metrohm DropSens, S.L. Vivero de Ciencias de la Salud, Calle Colegio Santo Domingo de Guzmán, s/n, 33010 Oviedo, Asturias, Spain  
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Internet Web Site: www.metrohm-dropsens.com
- **Emergency phone:** Metrohm DropSens, S.L. +34 985 27 76 85

**Section 2.- Hazards identification****Classification of the mixture:**

Not a hazardous mixture according to regulation EC 1272/2008.

**Label elements:**

Caution: substance not yet tested completely

**Other hazards:**

None

**Section 3.- Composition/Information on ingredients**

- **Palladium nanoparticles**      **Synonyms:** Pd, Palladium colloid  
**CAS:** - 7440-05-3  
**Concentration:** 0.02 – 0.03 mg/mL and 0.9 – 1.1 mg/mL
- **Water**      **Synonyms:** H<sub>2</sub>O  
**CAS:** 7732-18-5  
**Molecular weight:** 18 g/mol

**Section 4.- First aid measures**

- **General advice:** Consult a physician. Show this safety data sheet to the doctor in attendance.
- **After skin contact:** Wash skin with soap and copious amounts of water.
- **After ingestion:** Make victim drink plenty of water. Never give anything by mouth to an unconscious person, rinse mouth with water.
- **After eye contact:** Rinse out with plenty of water with the eyelid held wide open for at least 15 minutes.
- **After inhalation:** Move the person into fresh air. If it is necessary, give artificial respiration with oxygen.

**Section 5.- Fire-fighting measures**

- **Suitable extinguishing media:** dry power or dry sand.
- **Special hazards arising from the substance:** Palladium oxides, carbon dioxide and carbon monoxide.
- **Special protective equipment for fire fighting:** Wear self contained breathing apparatus for fire fighting if necessary.
- **Further information:** Use water spray to cool unopened containers.

### Section 6.- Accidental release measures

- **Person-related precautionary measures:** Use personal protective equipment. Avoid breathing vapours. Ensure adequate ventilation.
- **Environmental precautions:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
- **Methods and materials for containment and cleaning up:** Contain spillage and then with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.
- **Procedures for cleaning/absorption:** Keep in suitable, closed containers for disposal.

### Section 7.- Handling and storage

- **Handling:** Avoid eye and skin contact. Avoid inhalation of vapour or mist. Keep away from sources of ignition – No smoking. Take measures to prevent the build-up of electrostatic charge.
- **Storage:** Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

### Section 8.- Exposure controls/personal protection

#### Exposure controls

General industrial hygiene practice

- Hand protection Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique to avoid skin contact with this product.
- Eye protection Safety glasses with side-shields conforming to NIOSH (US) or EN166 (EU)
- Skin and body protection Choose body protection according to the amount and concentration of the dangerous substance at the work place. Handle with gloves. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and standard EN 374 derived from it.
- Hygiene measures Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### Section 9.- Physical and chemical properties

- **General information:**
  - Form: liquid
  - Colour: silver, metallic.
  - Odour: no data available
- **Important health, safety and environmental information:**
  - pH no data available
  - Melting temperature: No data available.
  - Ignition temperature: Not determined.
  - Upper/lower flammability or explosive limits: No data available.
  - Bulk Density: Not data available.
  - Solubility in other solvent: Soluble in polar solvents.
  - Relative vapour density: Not determined.
  - Refractive index: Not determined.

### Section 10.- Stability and reactivity

- **Reactivity:** No data available
- **Chemical Stability:** No data available.
- **Possibility of hazardous reactions:** No data available.
- **Incompatible materials:** alkali metals, oxidizing and peroxides.
- **Conditions to avoid:** Extremes of temperature and direct sunlight.
- **Hazardous decomposition products:** Other decomposition products – no data available.
- **Further information:** Stable under recommended storage conditions.

**Section 11.- Toxicological information**

- **Acute toxicity:** No data available.
- **Skin corrosion/irritation:** No data available.
- **Serious eye damage/eye irritation:** may cause moderate eye irritation.
- **Respiratory or skin sensitization:** No data available.
- **Germ cell mutagenicity:** No data available.
- **Carcinogenicity:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- **Specific target organ toxicity – single exposure:** No data available.
- **Specific target organ toxicity – repeated exposure:** No data available.
- **Aspiration hazard:** No data available.
- **Potential health effects**
  - **Skin corrosion/irritation:** toxic if absorbed through skin. May cause skin irritation.
  - **Inhalation:** toxic if inhaled. May cause respiratory tract irritation.
  - **Ingestion:** toxic if swallowed.
  - **Serious eye damage/eye irritation:** causes eye irritation.
  
- **Additional Information:** RTECS - No data available.

**Section 12.- Ecological information:**

To the best of our knowledge the ecological effects have not been thoroughly researched.  
Avoid contact with wastewaters or soil.

**Section 13.- Disposal considerations**

- **Product:** Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose this material.
- **Contaminated packaging:** Dispose of as unused product.

**Section 14.- Transport information**

Not a hazardous material for transportation

**Section 15.- Regulatory information**

This safety datasheet has been revised to comply with the requirements establish in (EC) 453/2010.

**Section 16.- Other information**

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The contents and format of this MSDS are in accordance with EC 453/2010.

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