

MATERIAL SAFETY DATA SHEET

Rhodium nanoparticles solution
According to EC N° 453/2010
Edition date 30/07/2020
Version 4.0

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

- **Identification of the product:** Rhodium nanoparticles solution
- **Chemical family:** Rhodium and Sodium Citrate
- **Product name:** DRP-RHNP-COL
- **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
Tel.- +34 985 27 76 85
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- **Emergency phone:** Metrohm DropSens, S.L. +34 985 27 76 85

Section 2.- Hazards identification

Caution! To the best of our knowledge the chemical, physical and toxicological properties of this material has not been thoroughly investigated. The present substance has been classified according to hazards identification of its components.

Classification of the mixture:

According to Regulation CLP (EC) No1272/2008

- Flammable solids (Category 1).

According to EU Directives 67/548 / EEC or 1999/45 / EC

- Highly flammable.

Label elements:



Hazard statements

- H228 - Flammable solid

Precautionary statements

- P210 - Keep away from heat, hot surfaces, sparks, open flames and any other ignition source. No Smoking.

Sentence (s) - R Caution statements:

- R11 Highly flammable.

Sentence (s) - S:

- S16 Keep away from any flame or source of sparks - Do not smoke. S22 Do not breath

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dust. S24/ 25 Avoid contact with eyes and skin.

Other hazards: None.

Caution: Substance not yet tested completely.

Section 3.- Composition/Information on ingredients

- **Rhodium nanoparticles** **Synonyms:** Rh, Rhodium colloid
CAS: 7440-16-6
Concentration: 0.025 mg/mL
Molecular weight: 102.91 g/mol
- **Sodium Citrate** **Synonyms:** Na₃C₆H₅O₇
CAS: 6132-04-3
Molecular weight: 258.07 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:** In case of combustion, rhodium oxides can be produced.
- **Special protective equipment for fire fighting:** Wear self contained breathing apparatus for fire fighting if necessary.
- **Further information:** Flammable liquid Check for at least 48 hours until the material is clear. Cool the container with water spray. Prevent the water used from coming into contact with surface water, the sewage system or aquifers.

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:** Collect and perform the removal with an adsorbent material. Ventilate and clean the spill area with water. 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.

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Section 8.- Exposure controls/personal protection

8.1. Control parameters:

Componente	No. CAS	Value	Control parameters	Base
Rhodium	7440-16-6	VLA-ED	1 mg/m ³	Professional Exposure Limits for Chemical Agents
	Observations	The terms 'soluble' and 'insoluble' are understood with reference to water.		

8.2. Exposure controls:

General industrial hygiene practice.

8.3. Personal protection:

Wear eye protection equipment tested and approved according to corresponding standards.

Handle with gloves. Gloves must be inspected before use. Avoid contact with the skin when removing gloves.

The gloves must comply with the specifications indicated in the applicable regulations.

Section 9.- Physical and chemical properties

- **General information:**
 - Form: liquid
 - Colour: black, metallic
 - Odour: no data available
- **Important health, safety and environmental information:**
 - pH: No data available.
 - Boiling point: No data available.
 - Flash point: No data available.
 - Explosion limits: No data available.
 - Vapour pressure: No data available.
 - Density: No data available.
 - Solubility in other solvents: Very low solubility in polar solvents.

Section 10.- Stability and reactivity

- **Reactivity:** No data available
- **Chemical Stability:** No data available.
- **Possibility of hazardous reactions:** No data available.
- **Incompatible materials:** Bases, Strong bases, Oxidizing agents, Strong oxidizing agents, Reducing agents, Lithium, Sodium / sodium oxides, Magnesium, Nitrates, Halogens, Chloride trifluoride, Oxygen difluoride.
- **Conditions to avoid:** Heat, flames and sparks.
- **Hazardous decomposition products:** Other decomposition products – no data available.
- **Further information:** Stable under recommended storage conditions.

Section 11.- Toxicological information

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- **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:**
 - **Ingestion:** Toxic if swallowed.
 - **Serious eye damage/eye irritation:** Causes eye irritation.
 - **Inhalation:** Toxic if inhaled. May cause respiratory tract irritation.
 - **Skin corrosion/irritation:** Toxic if absorbed through skin. May cause skin irritation.

Section 12.- Ecological information:

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

Section 13.- Disposal considerations

- **Product:** See 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

Date of creation: 13/02/2018

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

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