



Safety Data Sheet according to WHS Regulations

Printing date 10.02.2021

Version number 1

Revision: 10.02.2021

Hazardous according to criteria of Australian Safety and Compensation Council.

1 Identification

- **Product identifier**
- **Product name:** Rhodium Standard: 1000 µg/mL Rh in 20% HCl [500ml bottle]
- **Part number:** 5190-8510
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave Victoria 3170,
Australia
Tel: 1800 802 402
- **Further information obtainable from:** e-mail: pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(61)-290372994

2 Hazard(s) Identification

- **Classification of the substance or mixture**



corrosion

Met. Corr.1 H290 May be corrosive to metals.

- **Label elements**
- **GHS label elements**
The product is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS05

- **Signal word** Warning
- **Hazard statements**
H290 May be corrosive to metals.
- **Precautionary statements**
P234 Keep only in original container.
P390 Absorb spillage to prevent material damage.
P406 Store in corrosive resistant container /container with a corrosion resistant inner liner.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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3 Composition and Information on Ingredients

· **Chemical characterisation:** Mixtures

· **Description:** Aqueous solution.

· **Dangerous components:**

CAS: 7647-01-0 RTECS: MW 9620000	Hydrochloric acid ⚠ Acute Tox. 3, H331; ⚠ Skin Corr. 1B, H314; Eye Dam. 1, H318; ⚠ STOT SE 3, H335	<10%
CAS: 20765-98-4 RTECS: -	Rhodium(III) chloride hydrate ⚠ Muta. 2, H341; ⚠ Met. Corr. 1, H290; Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	<0.25%

· **Additional information:**

The concentration of the acid stated in this SDS is calculated as an absolute mass concentration (%w/v). This is less than the acid concentration stated on the product label and COA, which reflects a percent value of the commercially available concentrated aqueous form of the acid.

For the wording of the listed hazard phrases refer to section 16.

4 First Aid Measures

· **Description of first aid measures**

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for several minutes under running water.

· **After swallowing:** Rinse mouth. Do not induce vomiting.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

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

No further relevant information available.

5 Fire Fighting Measures

· **Extinguishing media**

· **Suitable extinguishing agents:** Use fire extinguishing methods suitable for surrounding conditions.

· **Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.

· **Advice for firefighters**

· **Protective equipment:**

HazChem Code: 2R

Wear self-contained respiratory protective device.

6 Accidental Release Measures

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

Wear protective equipment. Keep unprotected persons away.

· **Environmental precautions:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

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· Methods and material for containment and cleaning up:*Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).**Use neutralising agent.**Dispose of contaminated material as waste according to item 13.***· Reference to other sections***See Section 7 for information on safe handling.**See Section 8 for information on personal protection equipment.**See Section 13 for disposal information.*

7 Handling and Storage

· Handling:**· Precautions for safe handling** *Store in cool, dry place in tightly closed receptacles.***· Information about fire - and explosion protection:** *No special measures required.***· Conditions for safe storage, including any incompatibilities****· Storage:****· Requirements to be met by storerooms and receptacles:***Please refer to the manufacturer's certificate for specific storage and transport temperature conditions.**Store only in the original receptacle unless other advice is given on the CoA.**Keep container in a well-ventilated place. Keep away from sources of ignition and heat.***· Information about storage in one common storage facility:** *Store away from foodstuffs.***· Further information about storage conditions:** *Keep container tightly sealed.***· Specific end use(s)** *No further relevant information available.*

8 Exposure controls and personal protection

· Additional information about design of technical facilities: *No further data; see item 7.***· Control parameters****· Ingredients with limit values that require monitoring at the workplace:****CAS: 7647-01-0 Hydrochloric acid****WES** *Peak limitation: 7.5 mg/m³, 5 ppm***· Additional information:** *Lists used were valid at the time of SDS preparation.***· Exposure controls****· Personal protective equipment:****· General protective and hygienic measures:***Keep away from foodstuffs, beverages and feed.**Immediately remove all soiled and contaminated clothing**Wash hands before breaks and at the end of work.**Avoid contact with the eyes and skin.***· Respiratory protection:** *Not required.***· Protection of hands:***The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.**Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation*

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The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374



Protective gloves

- **Material of gloves**

PVC gloves

Neoprene gloves

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

9 Physical and Chemical Properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:

Liquid

Colour:

Colourless

- **Odour:**

Odourless

- **Odour threshold:**

Not determined.

- **pH-value:**

<2

- **Change in condition**

Melting point/freezing point:

Not determined.

Not determined.

Initial boiling point and boiling range: 100 °C

- **Flash point:**

Not applicable.

- **Flammability (solid, gas):**

Not determined.

- **Ignition temperature:**

Not determined

- **Decomposition temperature:**

Not determined.

- **Auto-ignition temperature:**

Product is not selfigniting.

- **Explosive properties:**

Not determined.

- **Explosion limits:**

Lower:

Not determined.

Upper:

Not determined.

- **Vapour pressure at 20 °C:**

23 hPa

- **Density:**

Not determined.

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· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Fully miscible.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Other information	No further relevant information available.

10 Stability and Reactivity

- **Reactivity**
Stable under normal conditions.
No further relevant information available.
- **Chemical stability** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:**
Formation of toxic gases is possible during heating or in case of fire.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** Heat.
- **Incompatible materials:**
Strong oxidizing agents.
Metals.
- **Hazardous decomposition products:** Formation of toxic gases is possible during heating or in case of fire.

11 Toxicological Information

- **Information on toxicological effects**
- **Acute toxicity**

LD/LC50 values relevant for classification:
CAS: 20765-98-4 Rhodium(III) chloride hydrate

Oral	LD50	1,302 mg/kg (rat)
	LD 50 (Intraperitoneal)	280 mg/kg (rat)
	LD 50 (Intravenous)	198 mg/kg (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

-AU-

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12 Ecological Information

- **Toxicity**

- **Aquatic toxicity:**

CAS: 20765-98-4 Rhodium(III) chloride hydrate

EC50/48 h 0.29 mg/l (daphnia)

EC50/96h 220 mg/l (fish)

- **Persistence and degradability** No further relevant information available.

- **Behaviour in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product to reach ground water, water course or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**

- **Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packaging:**

- **Recommendation:** Dispose of in accordance with national regulations.

- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

- **UN-Number**

- **ADG, IMDG, IATA**

- **ADG**

- **IMDG, IATA**

UN1789

1789 HYDROCHLORIC ACID solution

HYDROCHLORIC ACID solution

- **Transport hazard class(es)**

- **ADG, IMDG, IATA**



- **Class**

8 Corrosive substances.

- **Label**

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· Packing group	II
· ADG, IMDG, IATA	
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Corrosive substances.
· Hazard identification number (Kemler code):	80
· EMS Number:	F-A,S-B
· Segregation groups	Acids
· Stowage Category	C
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADG	1L
· Limited quantities (LQ)	Code: E2
· Excepted quantities (EQ)	Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	E
· Remarks:	HazChem Code: 2R
· UN "Model Regulation":	UN 1789 HYDROCHLORIC ACID SOLUTION, 8, II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Australian Inventory of Industrial Chemicals**

CAS: 7732-18-5 Water

CAS: 7647-01-0 Hydrochloric acid

· **Standard for the Uniform Scheduling of Medicines and Poisons**

CAS: 7647-01-0 Hydrochloric acid

S5, S6

· **Australia: Priority Existing Chemicals**

None of the ingredients is listed.

· **Hazard pictograms**



GHS05

· **Signal word** Warning

· **Hazard statements**

H290 May be corrosive to metals.

· **Precautionary statements**

P234 Keep only in original container.

P390 Absorb spillage to prevent material damage.

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P406 Store in corrosive resistant container /container with a corrosion resistant inner liner.

- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· **Relevant phrases**

- H290 May be corrosive to metals.
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H318 Causes serious eye damage.
- H331 Toxic if inhaled.
- H335 May cause respiratory irritation.
- H341 Suspected of causing genetic defects.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

· **Contact:**

· **Abbreviations and acronyms:**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Met. Corr.1: Corrosive to metals – Category 1
- Acute Tox. 4: Acute toxicity - oral – Category 4
- Acute Tox. 3: Acute toxicity - inhalation – Category 3
- Skin Corr. 1B: Skin corrosion/irritation – Category 1B
- Eye Dam. 1: Serious eye damage/eye irritation – Category 1
- Muta. 2: Germ cell mutagenicity – Category 2
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
- Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

· **Sources**

Tables 3.1 and 3.2 from Annex 6 of EC 1272/2008, EC 1907/2006, EH40/2005 as amended 2011, Registry of Toxic Effects of Chemical Substances (RTECS), The Dictionary of Substances and their Effects, 1st Edition, IUCLID.

- **Data compared to the previous version altered.** All sections have been updated.