

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 24.07.2020

Version number 5

Revision: 24.07.2020

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

· **Trade name:** Rhodiumbad als Konzentrat mit 20 oder 40 g Rh/l; Rhodiumbad Blancadur Ti Light mit 10g Rh/l
Rhodium bath as concentrate with 20 or 40 g Rh/l; Rhodium bath Blancadur Ti Light with 10g Rh/l

· **Article number:** 3110200101, 3110200110, 3110200107

1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

· **Application of the substance / the mixture** Galvanic bath

1.3 Details of the supplier of the safety data sheet**Manufacturer/Supplier:**

Wieland Edelmetalle GmbH

Schwenninger Str. 13

75179 Pforzheim

Telefon +49 (07231)-1393-0, Telefax +49 (07231)-1393-100

Further information obtainable from:

Wieland Edelmetalle GmbH

www.wieland-edelmetalle.de

msds@wieland-edelmetalle.de

1.4 Emergency telephone number:

Emergency CONTACT (24-Hour-Number):GBK GmbH +49 (0)6132-84463

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS08 health hazard

Muta. 2 H341 Suspected of causing genetic defects.



GHS05 corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

2.2 Label elements

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms**



GHS05 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**

sulphuric acid

Rhodium(III)sulfate

phosphoric acid

· **Hazard statements**

H314 Causes severe skin burns and eye damage.

H341 Suspected of causing genetic defects.

(Contd. on page 2)

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 24.07.2020

Version number 5

Revision: 24.07.2020

Trade name: Rhodiumbad als Konzentrat mit 20 oder 40 g Rh/l; Rhodiumbad Blancadur Ti Light mit 10g Rh/l
Rhodium bath as concentrate with 20 or 40 g Rh/l; Rhodium bath Blancadur Ti Light with 10g Rh/l

(Contd. of page 1)

· Precautionary statements

- P260 Do not breathe dusts or mists.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· 2.3 Other hazards

· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

- **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 7664-93-9 EINECS: 231-639-5	sulphuric acid Skin Corr. 1A, H314	10-40%
CAS: 10489-46-0 EINECS: 234-014-5	Rhodium(III)sulfate Muta. 2, H341; Met. Corr.1, H290; Skin Corr. 1B, H314; Eye Dam. 1, H318	2-<10%
CAS: 7664-38-2 EINECS: 231-633-2	phosphoric acid Skin Corr. 1B, H314; Acute Tox. 4, H302	1-5%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
 Immediately wash with water and soap and rinse thoroughly.
 If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
 Rinse out mouth and then drink plenty of water.
 Do not induce vomiting; call for medical help immediately.

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

No further relevant information available.

- **Hazards** Danger of gastric perforation.

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

No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

(Contd. on page 3)

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 24.07.2020

Version number 5

Revision: 24.07.2020

Trade name: Rhodiumbad als Konzentrat mit 20 oder 40 g Rh/l; Rhodiumbad Blancadur Ti Light mit 10g Rh/l
Rhodium bath as concentrate with 20 or 40 g Rh/l; Rhodium bath Blancadur Ti Light with 10g Rh/l

- (Contd. of page 2)
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
 - **5.3 Advice for firefighters**
 - **Protective equipment:** Wear self-contained respiratory protective device.
 - **Additional information**
 Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
 Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 Use neutralising agent.
 Dispose contaminated material as waste according to item 13.
 Ensure adequate ventilation.
- **6.4 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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:** The product is not flammable.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Storage class:** 8 B
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

7664-38-2 phosphoric acid

WEL	Short-term value: 2 mg/m ³
	Long-term value: 1 mg/m ³

- **Additional information:** The lists valid during the making were used as basis.
- **8.2 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.

(Contd. on page 4)

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 24.07.2020

Version number 5

Revision: 24.07.2020

Trade name: Rhodiumbad als Konzentrat mit 20 oder 40 g Rh/l; Rhodiumbad Blancadur Ti Light mit 10g Rh/l
Rhodium bath as concentrate with 20 or 40 g Rh/l; Rhodium bath Blancadur Ti Light with 10g Rh/l

(Contd. of page 3)

- **Respiratory protection:** Not necessary if room is well-ventilated.
- **Protection of hands:**



Protective gloves

- **Material of gloves**
 Chloroprene rubber, CR
 Butyl rubber, BR
 Nitrile rubber, NBR
 Natural rubber, NR

- **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.

The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

- **Not suitable are gloves made of the following materials:**

Strong material gloves
 Leather gloves

- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

SECTION 9: Physical and chemical properties

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

- **General Information**

- **Appearance:**

Form: Fluid
Colour: Orange
Odour: Product specific

- **pH-value at 20 °C:** <1

- **Change in condition**

Melting point/freezing point: Undetermined.
Initial boiling point and boiling range: 110 °C

- **Flash point:** Not applicable.

- **Ignition temperature:** Not applicable

- **Auto-ignition temperature:** Product is not selfigniting.

- **Explosive properties:** Product does not present an explosion hazard.

- **Explosion limits:**

Oxidising properties None

- **Vapour pressure:** Not determined.

- **Density at 20 °C:** 1.14 g/cm³

(Contd. on page 5)

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 24.07.2020

Version number 5

Revision: 24.07.2020

Trade name: Rhodiumbad als Konzentrat mit 20 oder 40 g Rh/l; Rhodiumbad Blancadur Ti Light mit 10g Rh/l
Rhodium bath as concentrate with 20 or 40 g Rh/l; Rhodium bath Blancadur Ti Light with 10g Rh/l

(Contd. of page 4)

· Solubility in / Miscibility with water:	Fully miscible.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Water:	52.9 %
Solids content:	0.0 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** Reacts with strong alkali.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Oral	LD50	45,000 mg/kg (rat)
------	------	--------------------

7664-93-9 sulphuric acid

Oral	LD50	2,140 mg/kg (rat)
------	------	-------------------

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**
Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity**
Suspected of causing genetic defects.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

GB

(Contd. on page 6)

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 24.07.2020

Version number 5

Revision: 24.07.2020

Trade name: Rhodiumbad als Konzentrat mit 20 oder 40 g Rh/l; Rhodiumbad Blancadur Ti Light mit 10g Rh/l
Rhodium bath as concentrate with 20 or 40 g Rh/l; Rhodium bath Blancadur Ti Light with 10g Rh/l

(Contd. of page 5)

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

7664-93-9 sulphuric acid

LC50 | 42 mg/l (96h) (Gambusia affinis (Mosquitofish))

· **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

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

Danger to drinking water if even small quantities leak into the ground.

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

Contact manufacturer for recycling information.

Must be specially treated adhering to official regulations.

· **Uncleaned packaging:**

· **Recommendation:**

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

Packaging may be reused or recycled after cleaning.

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

SECTION 14: Transport information

· **14.1 UN-Number**

· **ADR, IMDG, IATA**

UN3264

· **14.2 UN proper shipping name**

· **ADR**

3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (SULPHURIC ACID, Rhodium(III)sulfate)

· **IMDG, IATA**

CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (SULPHURIC ACID, Rhodium(III)sulfate)

· **14.3 Transport hazard class(es)**

· **ADR**



· **Class**

8 (C1) Corrosive substances.

(Contd. on page 7)

Safety data sheet according to 1907/2006/EC, Article 31


Printing date 24.07.2020

Version number 5

Revision: 24.07.2020

Trade name: Rhodiumbad als Konzentrat mit 20 oder 40 g Rh/l; Rhodiumbad Blancadur Ti Light mit 10g Rh/l
Rhodium bath as concentrate with 20 or 40 g Rh/l; Rhodium bath Blancadur Ti Light with 10g Rh/l

(Contd. of page 6)

· Label	8
· IMDG, IATA	
	
· Class	8 Corrosive substances.
· Label	8
· 14.4 Packing group · ADR, IMDG, IATA	II
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user · Danger code (Kemler): · EMS Number: · Segregation groups · Stowage Category · Stowage Code	Warning: Corrosive substances. 8 F-A,S-B Acids B SW2 Clear of living quarters.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category · Tunnel restriction code	2 E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., 8, II

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- National regulations:
- Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.07.2020

Version number 5

Revision: 24.07.2020

Trade name: Rhodumbad als Konzentrat mit 20 oder 40 g Rh/l; Rhodumbad Blancadur Ti Light mit 10g Rh/l
Rhodium bath as concentrate with 20 or 40 g Rh/l; Rhodium bath Blancadur Ti Light with 10g Rh/l

(Contd. of page 7)

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **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.
H341 Suspected of causing genetic defects.

· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organisation
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
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
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
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
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
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

· *** Data compared to the previous version altered.**