

Printing date 28.03.2018 Version number 3 Revision: 28.03.2018

SECTION 1: Identification of the substance/mixture and of the company/undertaking

· 1.1 Product identifier

• Trade name: WILAPLAT Hartglanzvergoldung rötlich-gelb cyanidh. 1g Au/l
WILAPLAT hard bright gold plating bath redish yellow (making-up salt)

· Article number: 3100102203

· 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



GHS06 skull and crossbones

Acute Tox. 2 H300 Fatal if swallowed.

Acute Tox. 1 H310 Fatal in contact with skin.

Acute Tox. 2 H330 Fatal if inhaled.



GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Carc. 1B H350 May cause cancer.



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

(Contd. on page 2)



Printing date 28.03.2018 Version number 3 Revision: 28.03.2018

Trade name: WILAPLAT Hartglanzvergoldung rötlich-gelb cyanidh. 1g Au/l
WILAPLAT hard bright gold plating bath redish yellow (making-up salt)

(Contd. of page 1)

- · 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 GHS06 GHS08

· Signal word Danger

· Hazard-determining components of labelling:

potassium cyanide potassium dicyanoaurate nickel potassium cyanide copper cyanide

· Hazard statements

H300+H310+H330 Fatal if swallowed, in contact with skin or if inhaled.

H315 Causes skin irritation.H318 Causes serious eye damage.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

H350 May cause cancer.

H410 Very toxic to aquatic life with long lasting effects.

· Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P361 Take off immediately all contaminated clothing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international

regulations.

· Additional information:

EUH029 Contact with water liberates toxic gas. EUH032 Contact with acids liberates very toxic gas.

- · 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 compone	ents:
CAS: 7778-53-2	tripo

tripotassium phosphate

50-100%

Skin Irrit. 2, H315; Eye Irrit. 2, H319

(Contd. on page 3)



Printing date 28.03.2018 Version number 3 Revision: 28.03.2018

Trade name: WILAPLAT Hartglanzvergoldung rötlich-gelb cyanidh. 1g Au/l
WILAPLAT hard bright gold plating bath redish yellow (making-up salt)

	(Con	td. of page 2)
CAS: 151-50-8	potassium cyanide	10-25%
EINECS: 205-792-3	Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330; Aquatic Acute 1, H400; Aquatic Chronic 1, H410	
CAS: 13967-50-5	potassium dicyanoaurate	5-10%
EINECS: 237-748-4	 Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330; Met. Corr.1, H290; Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Irrit. 2, H315 	
CAS: 14220-17-8	nickel potassium cyanide	1-5%
	 Water-react. 1, H260; Acute Tox. 3, H301; Resp. Sens. 1, H334; Carc. 1B, H350; Skin Sens. 1, H317 	
CAS: 544-92-3	copper cyanide	≤ 1%
EINECS: 208-883-6	Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330; Aquatic Acute 1, H400; Aquatic Chronic 1, H410	
· Additional informat	tion: 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.

Remove breathing equipment only after contaminated clothing have been completely removed.

· After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

Do not use mouth to mouth or mouth to nose resuscitation.

Use a respiratory bag or breathing device.

· After skin contact:

If skin irritation continues, consult a doctor.

Immediately wash with water and soap and rinse thoroughly.

· After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, 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

Nausea

Unconsciousness

Breathing difficulty

· 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.
- · For safety reasons unsuitable extinguishing agents: Water with full jet
- 5.2 Special hazards arising from the substance or mixture Hydrogen cyanide (HCN)
- · 5.3 Advice for firefighters
- · Protective equipment: Wear self-contained respiratory protective device.

CD



Printing date 28.03.2018 Version number 3 Revision: 28.03.2018

Trade name: WILAPLAT Hartglanzvergoldung rötlich-gelb cyanidh. 1g Au/l
WILAPLAT hard bright gold plating bath redish yellow (making-up salt)

(Contd. of page 3)

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Avoid formation of dust.

Wear protective equipment. Keep unprotected persons away.

· 6.2 Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.

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

· 6.3 Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

• **6.4 Reference to other sections** See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

- · Information about fire and explosion protection: Keep respiratory protective device available.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
- · Information about storage in one common storage facility: Do not store together with acids.
- · Further information about storage conditions:

Store under lock and key and with access restricted to technical experts or their assistants only. Keep receptacle tightly sealed.

- · Storage class: 6.1 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:

151-50-8 potassium cyanide

WEL Long-term value: 5 mg/m³ as CN; Sk

13967-50-5 potassium dicyanoaurate

WEL Long-term value: 5 mg/m³ as CN; Sk

14220-17-8 nickel potassium cyanide

WEL Long-term value: 0.1 mg/m³ as Ni; Sk; Carc; Sen

544-92-3 copper cyanide

WEL Long-term value: 5 mg/m³ as CN; Sk

· DNELs

13967-50-5 potassium dicyanoaurate

Oral DNEL(Comm.)akut 4.5 mg/kg (-) (CN)

(Contd. on page 5)



Printing date 28.03.2018 Version number 3 Revision: 28.03.2018

Trade name: WILAPLAT Hartglanzvergoldung rötlich-gelb cyanidh. 1g Au/l WILAPLAT hard bright gold plating bath redish yellow (making-up salt)

(Contd. of page 4)

DNEL(Com.)longterm	0.05 mg/kg (-) (CN)
DNEL(Industrie) akut	
DNEL(Indust.)longt.	0.05 mg/kg (-) (CN)

· PNECs

13967-50-5 potassium dicyanoaurate

PNEC (Industrie) 0.03 μg/l (H2O) (CN) PNEC (Commercial) 0.03 μg/l (H2O) (CN)

- · 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.

Store protective clothing separately.

Avoid contact with the eyes and skin.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Short term filter device:

Filter P3

Filter P2

· Protection of hands:



Protective gloves

· Material of gloves

Chloroprene rubber, CR Nitrile rubber, NBR

Butyl rubber, BR

Natural rubber, NR

Fluorocarbon rubber (Viton)

· Penetration time of glove material

The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended. The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Not suitable are gloves made of the following materials:

Leather gloves

Strong material gloves

· Eye protection:



Tightly sealed goggles

· **Body protection:** Protective work clothing

GB



Printing date 28.03.2018 Version number 3 Revision: 28.03.2018

Trade name: WILAPLAT Hartglanzvergoldung rötlich-gelb cyanidh. 1g Au/l WILAPLAT hard bright gold plating bath redish yellow (making-up salt)

(Contd. of page 5)

9.1 Information on basic physical General Information	and chemical properties
Appearance:	
Form:	Solid
Colour:	Whitish
Odour:	Characteristic
pH-value at 20 °C:	≥10
Change in condition Melting point/freezing point: Initial boiling point and boiling	Undetermined. range: Undetermined.
Flash point:	Not applicable.
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product does not present an explosion hazard.
Density at 20 °C:	750 kg/m3
Solubility in / Miscibility with water at 20 °C:	ca. 220 g/l
Solvent content:	
Organic solvents:	0,0 %

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 Contact with acids releases toxic gases.
- 10.4 Conditions to avoid No further relevant information available.
- · 10.5 Incompatible materials: No further relevant information available.
- · 10.6 Hazardous decomposition products: Hydrogen cyanide (prussic acid)

SECTION 11: Toxicological information

- · 11.1 Information on toxicological effects
- · Acute toxicity

Fatal if swallowed, in contact with skin or if inhaled.

		,	
	· LD/LC50 values relevant for classification:		
	ATE (Acu	ite Toxicit	y Estimates)
	Oral	LD50	24.5 mg/kg
	Dermal	LD50	24.5 mg/kg
	Inhalative	LC50/4 h	0.197 mg/l
151-50-8 potassium cyanide		cyanide	
	0 1	LDEO	F (I. ()

151-50-8 potassium cyanide		
Oral	LD50	5 mg/kg (rat)
	LDLO	2.86 mg/kg (human) (RTECS)
Dermal	LD50	5 mg/kg (ATE)

(Contd. on page 7)



Printing date 28.03.2018 Version number 3 Revision: 28.03.2018

Trade name: WILAPLAT Hartglanzvergoldung rötlich-gelb cyanidh. 1g Au/l WILAPLAT hard bright gold plating bath redish yellow (making-up salt)

		(Contd. of page 6)
Inhalative	LC50/4 h	0.05 mg/l (ATE)
13967-50-5 potassium dicyanoaurate		
Oral	LD50	29 mg/kg (rat)
Dermal	LD50	100 mg/kg (human) (CN)
Inhalative	LC50/4 h	0.05 mg/l (ATE)
	LC50	524 mg/kg (10min) (human) (HCN)
14220-17-8 nickel potassium cyanide		
Oral LD50 275 mg/kg (mus)		
544-92-3 copper cyanide		
Oral	LD50	126 mg/kg (rat)
Dermal	LD50	5 mg/kg (ATE)
Inhalative		0.05 mg/l (ATE)

- · Primary irritant effect:
- · Skin corrosion/irritation

Causes skin irritation.

· Serious eye damage/irritation

Causes serious eye damage.

· Respiratory or skin sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- · Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity

May cause cancer.

- · 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.

SECTION 12: Ecological information

· 12.1 Toxicity

- 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.

(Contd. on page 8)



Printing date 28.03.2018 Version number 3 Revision: 28.03.2018

Trade name: WILAPLAT Hartglanzvergoldung rötlich-gelb cyanidh. 1g Au/l WILAPLAT hard bright gold plating bath redish yellow (making-up salt)

(Contd. of page 7)

- · Ecotoxical effects:
- · Remark: Toxic for fish
- · Additional ecological information:
- · General notes:

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

Water danger class 3 (German Regulation) (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely 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

Must be specially treated adhering to official regulations.

Contact manufacturer for recycling information.

- · Uncleaned packaging:
- · Recommendation:

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning. Packagings that may not be cleansed are to be disposed of in the same manner as the product.

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

SECTION 14: Transport inform	nation
· 14.1 UN-Number · ADR, IMDG, IATA	UN1588
· 14.2 UN proper shipping name	
· ADR	1588 CYANIDES, INORGANIC, SOLID, N.O.S
· IMDG	(POTASSIUM CYANIDE, potassium dicyanoaurate) CYANIDES, INORGANIC, SOLID, N.O.S
IMDG	(POTASSIUM CYANIDE, potassium dicyanoaurate)
	MARINE POLLUTANT
· IATA	CYANIDES, INORGANIC, SOLID, N.O.S (POTASSIUM CYANIDE, potassium dicyanoaurate)
· 14.3 Transport hazard class(es)	
· ADR	

· Class	6.1 (T5) Toxic substances.
· Label	6.1

(Contd. on page 9)



Printing date 28.03.2018 Version number 3 Revision: 28.03.2018

Trade name: WILAPLAT Hartglanzvergoldung rötlich-gelb cyanidh. 1g Au/l WILAPLAT hard bright gold plating bath redish yellow (making-up salt)

(Contd. of page 8) · IMDG 6.1 Toxic substances. · Class · Label 6.1 \cdot IATA 6.1 Toxic substances. · Class · Label 6.1 · 14.4 Packing group · ADR, IMDG, IATA II · 14.5 Environmental hazards: · Marine pollutant: Yes Symbol (fish and tree) · Special marking (ADR): Symbol (fish and tree) · 14.6 Special precautions for user Warning: Toxic substances. · Danger code (Kemler): F-A,S-A · EMS Number: · Segregation groups Cyanides · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable. · Transport/Additional information: · ADR · Limited quantities (LO) 500 g 2 · Transport category D/E · Tunnel restriction code · UN "Model Regulation": UN1588, CYANIDES, INORGANIC, SOLID, N.O.S., 6.1, 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.
- · Seveso category
- H1 ACUTE TOXIC
- O3 Substances or mixtures with hazard statement EUH029
- E1 Hazardous to the Aquatic Environment
- · Qualifying quantity (tonnes) for the application of lower-tier requirements 5 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 20 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 27

(Contd. on page 10)



Printing date 28.03.2018 Version number 3 Revision: 28.03.2018

Trade name: WILAPLAT Hartglanzvergoldung rötlich-gelb cyanidh. 1g Au/l WILAPLAT hard bright gold plating bath redish vellow (making-up salt)

(Contd. of page 9)

- · National regulations:
- · Technical instructions (air):

Class	Share in %
III	0.7

- · Waterhazard class: Water danger class 3 (Self-assessment): extremely hazardous for water.
- · 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

H260 In contact with water releases flammable gases which may ignite spontaneously.

H290 May be corrosive to metals.

H300 Fatal if swallowed.

H301 Toxic if swallowed.

H310 Fatal in contact with skin.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H330 Fatal if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H350 May cause cancer.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

· 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)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Water-react. 1: Substances and mixtures which in contact with water emit flammable gases - Category 1

Met. Corr.1: Corrosive to metals - Category 1

Acute Tox. 2: Acute toxicity - Category 2

Acute Tox. 3: Acute toxicity - Category 3

Acute Tox. 1: Acute toxicity - Category 1

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation - Category 2

Resp. Sens. 1: Respiratory sensitisation - Category 1

Skin Sens. 1: Skin sensitisation – Category 1

Carc. 1B: Carcinogenicity - Category 1B

Carc. 1B: Carcinogenicity - Category 1B

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

* Data compared to the previous version altered.