

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

Printing date 08.03.2017

Version number 2

Revision: 08.03.2017

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

- **1.1 Product identifier**
- **Trade name: Wilaplat Hartglanzvergoldung Feingold cyanid. 1g Au/l**
WILAPLAT hard bright gold plating bath fine gold (making-up salt)
- **Article number:** 3100101903
- **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:**
GIZ-Nord, Göttingen, Germany
+49 551 19240
Member of EPECS Network

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.



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.

(Contd. on page 2)

GB

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

Printing date 08.03.2017

Version number 2

Revision: 08.03.2017

Trade name: Wilaplat Hartglanzvergoldung Feingold cyanid. 1g Au/l
WILAPLAT hard bright gold plating bath fine gold (making-up salt)

(Contd. of page 1)

· Hazard pictograms



GHS05 GHS06 GHS09

· Signal word Danger

· Hazard-determining components of labelling:

potassium cyanide
 potassium dicyanoaurate

· Hazard statements

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

H315 Causes skin irritation.

H318 Causes serious eye damage.

H411 Toxic to aquatic life with long lasting effects.

· Precautionary statements

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

P280 Wear protective gloves/protective clothing/eye protection/face protection.

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.

P405 Store locked up.

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

· Additional information:

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 components:

CAS: 7778-53-2	tripotassium phosphate Skin Irrit. 2, H315; Eye Irrit. 2, H319	25-100%
CAS: 151-50-8 EINECS: 205-792-3	potassium cyanide Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330; Aquatic Acute 1, H400; Aquatic Chronic 1, H410	10-<25%
CAS: 13967-50-5 EINECS: 237-748-4	potassium dicyanoaurate 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	5-<7%
CAS: 7757-83-7 EINECS: 231-821-4	sodium sulphite Skin Irrit. 2, H315; Eye Irrit. 2, H319	1-<3%

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

GB

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.03.2017

Version number 2

Revision: 08.03.2017

Trade name: Wilaplat Hartglanzvergoldung Feingold cyanid. 1g Au/l
WILAPLAT hard bright gold plating bath fine gold (making-up salt)

(Contd. of page 2)

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **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.
- **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.

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.
Pick up mechanically.
- **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.

(Contd. on page 4)

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

Printing date 08.03.2017

Version number 2

Revision: 08.03.2017

**Trade name: Wilaplat Hartglanzvergoldung Feingold cyanid. 1g Au/l
WILAPLAT hard bright gold plating bath fine gold (making-up salt)**

(Contd. of page 3)

- Open and handle receptacle with care.
- Prevent formation of dust.
- **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/m ³ as CN; Sk
-----	---

13967-50-5 potassium dicyanoaurate

WEL	Long-term value: 5 mg/m ³ as CN; Sk
-----	---

· DNELs

13967-50-5 potassium dicyanoaurate

Oral	DNEL(Comm.)akut	4.5 mg/kg (-) (CN)
	DNEL(Com.)longterm	0.05 mg/kg (-) (CN)
	DNEL(Industrie) akut	4.5 mg/kg (-) (CN)
	DNEL(Indust.)longt.	0.05 mg/kg (-) (CN)

· PNECs

13967-50-5 potassium dicyanoaurate

PNEC (Industrie)	0.03 µg/l (H ₂ O) (CN)
PNEC (Commercial)	0.03 µg/l (H ₂ O) (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

(Contd. on page 5)

**Trade name: Wilaplat Hartglanzvergoldung Feingold cyanid. 1g Au/l
WILAPLAT hard bright gold plating bath fine gold (making-up salt)**

(Contd. of page 4)

· **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.

Value for the permeation: Level ≤ 6

The exact break through 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:**

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:	Solid
Colour:	White
Odour:	Characteristic

· **pH-value at 20 °C:** ≥10

· **Change in condition**

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	Undetermined.

· **Flash point:** Not applicable.

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

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

· **Density:**

Bulk density at 20 °C:	ca. 750 kg/m ³
------------------------	---------------------------

· **Solubility in / Miscibility with water at 20 °C:** 220 g/l

· **Solvent content:**

Organic solvents:	0.0 %
-------------------	-------

Solids content:	100 %
-----------------	-------

(Contd. on page 6)

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

Printing date 08.03.2017

Version number 2

Revision: 08.03.2017

**Trade name: Wilaplat Hartglanzvergoldung Feingold cyanid. 1g Au/l
WILAPLAT hard bright gold plating bath fine gold (making-up salt)**

(Contd. of page 5)

· **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** 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 (Acute Toxicity Estimates)

Oral	LD50	25.7 mg/kg (rat)
Dermal	LD50	26.6 mg/kg
Inhalative	LC50/4 h	0.208 mg/l

151-50-8 potassium cyanide

Oral	LD50	5 mg/kg (rat)
	LDLO	2.86 mg/kg (human) (RTECS)
Dermal	LD50	5 mg/kg (ATE)
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)

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **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** Based on available data, the classification criteria are not met.
- **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 7)

Trade name: Wilaplat Hartglanzvergoldung Feingold cyanid. 1g Au/l
WILAPLAT hard bright gold plating bath fine gold (making-up salt)

(Contd. of page 6)

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

151-50-8 potassium cyanide

LC50	0.45 mg/l (96h) (Lepomis macrochirus (bluegrill))
EC50	2 mg/l (48h) (Daphnia magna (water flea))
EC50	1.8-1.9 mg/l (72h) (Eutosiphon sulcatum) (CN)
IC50	0.03 mg/l (8d) (Sc.quadricauda)

13967-50-5 potassium dicyanoaurate

LC50	0.083 mg/l (96h) (Lepomis macrochirus (bluegrill)) (CN)
LC50	0.12 mg/l (96h) (Pimephales promelas (fathead minnow)) (CN)
	0.057 mg/l (96h) (Onchorhynchus mykiss (rainbow trout)) (CN)
EC50	0.041 mg/l (48h) (Daphnia magna (water flea)) (CN)
EC50	1.8 mg/l (72h) (Eutosiphon sulcatum) (CN)
IC50	0.03 mg/l (8d) (Sc.quadricauda) (CN)

· **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.

· Ecotoxicological 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 information

· 14.1 UN-Number

· **ADR, IMDG, IATA**

UN1588

(Contd. on page 8)

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

Printing date 08.03.2017

Version number 2

Revision: 08.03.2017

**Trade name: Wilaplat Hartglanzvergoldung Feingold cyanid. 1g Au/l
WILAPLAT hard bright gold plating bath fine gold (making-up salt)**

(Contd. of page 7)

· 14.2 UN proper shipping name

· **ADR** 1588 CYANIDES, INORGANIC, SOLID, N.O.S. (POTASSIUM CYANIDE, potassium dicyanoaurate), ENVIRONMENTALLY HAZARDOUS

· **IMDG** CYANIDES, INORGANIC, SOLID, N.O.S. (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

· **IMDG**



· **Class** 6.1 Toxic substances.
· **Label** 6.1

· **IATA**



· **Class** 6.1 Toxic substances.
· **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

· **Danger code (Kemler):** Warning: Toxic substances.
60

· **EMS Number:** F-A,S-A

· **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 (LQ)** 500 g

· **Transport category** 2

(Contd. on page 9)

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

Printing date 08.03.2017

Version number 2

Revision: 08.03.2017

Trade name: Wilaplat Hartglanzvergoldung Feingold cyanid. 1g Au/l
WILAPLAT hard bright gold plating bath fine gold (making-up salt)

(Contd. of page 8)

· Tunnel restriction code	D/E
· UN "Model Regulation":	UN1588, CYANIDES, INORGANIC, SOLID, N.O.S. (POTASSIUM CYANIDE, potassium dicyanoaurate), ENVIRONMENTALLY HAZARDOUS, 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
E2 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
- **National regulations:**
- **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**
H290 May be corrosive to metals.
H300 Fatal if swallowed.
H310 Fatal in contact with skin.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
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
Met. Corr.1: Corrosive to metals – Category 1
Acute Tox. 2: Acute toxicity – Category 2
Acute Tox. 1: Acute toxicity – Category 1

(Contd. on page 10)

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

Printing date 08.03.2017

Version number 2

Revision: 08.03.2017

Trade name: Wilaplat Hartglanzvergoldung Feingold cyanid. 1g Au/l
WILAPLAT hard bright gold plating bath fine gold (making-up salt)

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
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
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
· *** Data compared to the previous version altered.**

(Contd. of page 9)

GB