

Trade name: Gold Plating Bath JE250 - 3 g/L Au

Version: Draft /

Date revised

Substance number: 7251.0000

Replaces Version: 1 / WORLD

Print date: 18.06.2025

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

1.1. Product identifier

Gold Plating Bath JE250 - 3 g/L Au

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

Use of the substance/preparation

Galvanic Bath, do not use for private purposes, Food, beverages and animal feed.

Identified Uses

PC14 Metal surface treatment products, including galvanic and electroplating products

1.3. Details of the supplier of the safety data sheet

Address/Manufacturer

Jentner Plating Technology GmbH

Johann-Staib-Straße 2

75179 Pforzheim

Telephone no. +49 (0)7231/4180940

Information provided by / telephone Laboratory department; Opening hours 8:00-16:00

E-mail address of person responsible sales@jentner.de

for this SDS

1.4. Emergency telephone number

Poisoning Information Center Freiburg: +49(0)761/19240

SECTION 2: Hazards identification ***

2.1. Classification of the substance or mixture

Classification (Regulation (EC) No. 1272/2008)

Classification (Regulation (EC) No. 1272/2008)

Skin Corr. 1B H314

Eye Dam. 1 H318

Carc. 1B H350i

Aquatic Chronic 3 H412

The product is classified and labelled in accordance with Regulation (EC) No 1272/2008

For explanation of abbreviations see section 16.

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

Hazard pictograms



Signal word

Danger

Hazard statements ***

H314 Causes severe skin burns and eye damage.



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H350i May cause cancer by inhalation.
 H412 Harmful to aquatic life with long lasting effects.

Precautionary statements ***

P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER or doctor.
 P501.1 Dispose of contents/container to industrial incineration plant.

Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)

contains potassium hydroxide; Cobalt sulphate, heptahydrate
 EUH208 Contains Cobalt sulphate, heptahydrate, Potassium gold-I-cyanid (68,2% Au), May produce an allergic reaction.

Supplemental information

Further supplemental information

Restricted to professional users

2.3. Other hazards

No special hazards have to be mentioned.

The product contains no PBT substances. The product contains no vPvB substances. This product does not contain a substance that has endocrine disrupting properties with respect to human. The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

SECTION 3: Composition/information on ingredients

Hazardous ingredients

Citric acid, monohydrate

CAS No. 5949-29-1
 EINECS no. 201-069-1
 Registration no. 01-2119457026-42
 Concentration >= 1 < 10 %
 Classification (Regulation (EC) No. 1272/2008)
 Eye Irrit. 2 H319
 STOT SE 3 H335

potassium hydroxide

CAS No. 1310-58-3
 EINECS no. 215-181-3
 Registration no. 01-2119487136-33
 Concentration >= 2 < 3 %
 Classification (Regulation (EC) No. 1272/2008)
 Acute Tox. 4 H302
 Skin Corr. 1A H314
 Met. Corr. 1 H290

Concentration limits (Regulation (EC) No. 1272/2008)

Eye Irrit. 2 H319 >= 0,5 < 2 %
 Skin Corr. 1A H314 >= 5 %
 Skin Corr. 1B H314 >= 2 < 5 %
 Skin Irrit. 2 H315 >= 0,5 < 2 %

ATE oral 333 mg/kg

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Potassium gold-I-cyanid (68,2% Au)

CAS No. 13967-50-5
 EINECS no. 237-748-4
 Registration no. 01-2120130777-52
 Concentration \geq 0,25 < 0,73 %

Classification (Regulation (EC) No. 1272/2008)

Met. Corr. 1	H290
Skin Irrit. 2	H315
Eye Dam. 1	H318
Aquatic Chronic 1	H410
Acute Tox. 2	H300
Acute Tox. 2	H330
Aquatic Acute 1	H400
Skin Sens. 1	H317

ATE	oral	29	mg/kg
cATpE	inhalative, Dust/Mist	0,05	mg/l

Cobalt sulphate, heptahydrate

CAS No. 10026-24-1
 EINECS no. 233-334-2
 Concentration \geq 0,1 < 0,25 %

Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 4	H302
Resp. Sens. 1	H334
Skin Sens. 1	H317
Muta. 2	H341
Carc. 1B	H350i
Repr. 1B	H360F
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Concentration limits (Regulation (EC) No. 1272/2008)

Carc. 1B H350i \geq 0,01 %**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

Remove contaminated, soaked clothing immediately and dispose of safely. Adhere to personal protective measures when giving first aid. Clean body thoroughly (bath, shower). In any case show the physician the Safety Data Sheet.

After inhalation

Ensure supply of fresh air. Remove affected person from danger area. Seek medical advice immediately.

After skin contact

Wash off immediately with soap and water. Seek medical advice immediately.

After eye contact

Separate eyelids, wash the eyes thoroughly with water (15 min.). Take medical treatment.

After ingestion

Call in a physician immediately and show him the Safety Data Sheet. Rinse mouth thoroughly with water. Let plenty of water be drunk in small gulps. Do not induce vomiting.

Adhere to personal protective measures when giving first aid

First aider: Pay attention to self-protection!

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

Until now no symptoms known so far.

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

Hints for the physician / hazards

In the case of swallowing with subsequent vomiting, aspiration of the lungs can occur which can lead to chemical pneumonia or asphyxiation.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Dry powder

Non suitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

In case of combustion evolution of dangerous gases possible.

5.3. Advice for firefighters

Special protective equipment for fire-fighting

Do not inhale explosion and/or combustion gases. In case of combustion use a suitable breathing apparatus. Wear full protective suit.

Other information

Collect contaminated fire-fighting water separately, must not be discharged into the drains. Fire residues and contaminated fire-fighting water must be disposed of in accordance with the local regulations. Observe manufacturer's / distributor's instructions.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use breathing apparatus if exposed to vapours/dust/aerosol. Avoid contact with skin, eyes and clothing. Refer to protective measures listed in Sections 7 and 8.

6.2. Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers). Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil. Retain and dispose of contaminated wash water. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Pick up with absorbent material. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations. Containers in which spilt substance has been collected must be adequately labelled. Dispose of absorbed material in accordance with the regulations.

6.4. Reference to other sections

Refer to protective measures listed in Sections 7 and 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid formation of aerosols. Perform filling operations only at stations with exhaust ventilation facilities. Provide suitable exhaust ventilation at the processing machines. If workplace limits are exceeded, a

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respiratory protection approved for this particular job must be worn. Keep container tightly closed.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep in original packaging, tightly closed. Storage rooms must be properly ventilated. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Provide solvent-resistant and impermeable floor.

Hints on storage assembly

Do not store together with foodstuffs.

Storage classes

Storage class according to TRGS 510	6.1D	Non-combustible substances of acute toxicity, category 3 / hazardous substances that are toxic or produce chronic effects
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Further information on storage conditions

Keep under lock and key or accessible only to specialists or people who are authorized.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Other information

Contains no substances with occupational exposure limit values.

Derived No/Minimal Effect Levels (DNEL/DMEL)

potassium hydroxide

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	= 1	mg/m ³

Potassium gold-I-cyanid (68,2% Au)

Type of value	Derived No Effect Level (DNEL)	
Route of exposure	dermal	
Mode of action	Chronic effects	
Concentration	= 0,1	mg/kg

Type of value	Derived No Effect Level (DNEL)	
Route of exposure	inhalative	
Mode of action	Chronic effects	
Concentration	= 0,071	mg/m ³

Cobalt sulphate, heptahydrate

Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	= 0,105	mg/m ³

Predicted No Effect Concentration (PNEC)

Potassium gold-I-cyanid (68,2% Au)

Type of value	PNEC	
Type	Freshwater	
Concentration	= 0,2	µg/l



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Type of value	PNEC		
Type	Freshwater sediment		
Concentration	= 0,33		mg/kg
Type of value	PNEC		
Type	Water (intermittent release)		
Concentration	= 2		µg/l
Type of value	PNEC		
Type	Sewage treatment plant (STP)		
Concentration	= 6		mg/l
Type of value	PNEC		
Type	Soil		
Concentration	= 0,067		mg/kg
Type of value	PNEC		
Type	Saltwater		
Concentration	= 0,02		µg/l
Type of value	PNEC		
Type	Marine sediment		
Concentration	= 0,033		mg/kg

Cobalt sulphate, heptahydrate

Type of value	PNEC		
Type	Water		
Concentration	= 500		mg/m ³
Type of value	PNEC		
Type	Saltwater		
Concentration	= 2400		mg/m ³
Type of value	PNEC		
Type	Sediment		
Concentration	= 11000		mg/m ³
Type of value	PNEC		
Type	Marine sediment		
Concentration	= 9500		mg/m ³
Type of value	PNEC		
Type	Soil		
Concentration	= 7900		mg/m ³
Type of value	PNEC		
Type	Sewage treatment plant (STP)		
Concentration	= 400		mg/m ³

8.2. Exposure controls

General protective and hygiene measures

Hold emergency shower available. Hold eye wash fountain available. Do not inhale gases/vapours/aerosols. Avoid contact with skin and eyes. Do not eat, drink or smoke during work time. Storage of foodstuffs in work rooms is forbidden. Wash hands before breaks and after work. Clean skin thoroughly after work; apply skin cream.

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Respiratory protection

If workplace limits are exceeded, a respiratory protection approved for this particular job must be worn.

Hand protectionChemical resistant gloves
Appropriate Material neoprene**Eye protection**

Safety glasses with side protection shield; Face shield

Body protection

Clothing as usual in the chemical industry. Protective shoes

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state	liquid
Colour	pink
Odour	odourless
Melting point	
Remarks	not determined
Freezing point	
Remarks	not determined
Boiling point or initial boiling point and boiling range	
Remarks	not determined
Flammability	
evaluation	not determined
Upper and lower explosive limits	
Remarks	not determined
Flash point	
Remarks	Not applicable
Ignition temperature	
Remarks	not determined
Decomposition temperature	
Remarks	not determined
pH value	
Value	3,8 to 4,2
Viscosity	
Remarks	not determined
Solubility(ies)	
Remarks	not determined
Partition coefficient n-octanol/water (log value)	
Remarks	not determined
Vapour pressure	
Remarks	not determined
Density and/or relative density	
Value	= 1,030 to 1,040 g/ml
Relative vapour density	
Remarks	not determined

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9.2. Other information**Odour threshold**

Remarks not determined

Evaporation rate (ether = 1) :

Remarks not determined

Solubility in water

Remarks not determined

Explosive properties

evaluation not determined

Oxidising properties

Remarks not determined

Other information

None known

SECTION 10: Stability and reactivity**10.1. Reactivity**

No hazardous reactions when stored and handled according to prescribed instructions.

10.2. Chemical stability

No hazardous reactions known.

10.3. Possibility of hazardous reactions

No hazardous reactions known.

10.4. Conditions to avoid

No hazardous reactions known.

10.5. Incompatible materials

None known

10.6. Hazardous decomposition products

Toxic gases/vapours, Irritant gases/vapours

SECTION 11: Toxicological information**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute oral toxicity**ATE 4.723,32 mg/kg
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Method calculated value (Regulation (EC) No. 1272/2008)

Acute oral toxicity (Components)**potassium hydroxide**Species rat
LD50 333 mg/kg**Potassium gold-I-cyanid (68,2% Au)**Species rat
LD50 = 29 mg/kg**Cobalt sulphate, heptahydrate**Species rat
LD50 = 582 mg/kg

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Acute dermal toxicity

Remarks Based on available data, the classification criteria are not met.

Acute dermal toxicity (Components)**Potassium gold-I-cyanid (68,2% Au)**

Species	guinea pig	
LD50	= 5	mg/kg

Acute inhalational toxicity

ATE	11,3688	mg/l
Administration/Form	Dust/Mist	
Method	calculated value (Regulation (EC) No. 1272/2008)	
Remarks	Based on available data, the classification criteria are not met.	

Acute inhalative toxicity (Components)**Potassium gold-I-cyanid (68,2% Au)**

Species	rat	
LC50	= 0,05	mg/l
Duration of exposure	4	h

Skin corrosion/irritation

evaluation	corrosive
Remarks	The classification criteria are met.

Serious eye damage/irritation

evaluation	corrosive
Remarks	The classification criteria are met.

Sensitization

Remarks Based on available data, the classification criteria are not met.

Subacute, subchronic, chronic toxicity

Remarks not determined

Mutagenicity

Remarks Based on available data, the classification criteria are not met.

Reproductive toxicity

Remarks Based on available data, the classification criteria are not met.

Carcinogenicity

evaluation	May cause cancer by inhalation.
Remarks	The classification criteria are met.

Specific Target Organ Toxicity (STOT)**Single exposure**

Remarks Based on available data, the classification criteria are not met.

Repeated exposure

Remarks Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

11.2 Information on other hazards**Endocrine disrupting properties with respect to humans**

The product does not contain a substance that has endocrine disrupting properties with respect to humans.

Experience in practice

Inhalation may lead to irritation of the respiratory tract.

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No toxicological data are available.

SECTION 12: Ecological information

12.1. Toxicity

General information

not determined

12.2. Persistence and degradability

General information

not determined

12.3. Bioaccumulative potential

General information

not determined

Partition coefficient n-octanol/water (log value)

Remarks not determined

12.4. Mobility in soil

General information

not determined

12.5. Results of PBT and vPvB assessment

General information

not determined

Results of PBT and vPvB assessment

The product contains no PBT substances
The product contains no vPvB substances.

12.6 Endocrine disrupting properties

Endocrine disrupting properties with respect to the environment

The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects

General information

not determined

General information / ecology

Do not allow to enter soil, waterways or waste water canal. Avoid release into the atmosphere.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations for the product

Allocation of a waste code number, according to the European Waste Catalogue (EWC), should be carried out in agreement with the regional waste disposal company.

Disposal recommendations for packaging

Packaging that cannot be cleaned should be disposed off in agreement with the regional waste disposal company.

SECTION 14: Transport information ***

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	Land transport ADR/RID ***	Marine transport IMDG/GGVSee ***	Air transport ICAO/IATA ***
14.1. UN number or ID number	The product does not constitute a hazardous substance in land transport.	The product does not constitute a hazardous substance in sea transport.	The product does not constitute a hazardous substance in air transport.
14.2. UN proper shipping name	-	-	-
14.3. Transport hazard class(es)	-	-	-
Label			
14.4. Packing group	-	-	-

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Other information

The product does not contain substances according to: Candidate List for inclusion in Annex XIV of Regulation (EC) No. 1907/2006 (REACH).

15.2. Chemical safety assessment

For this preparation a chemical safety assessment has not been carried out.

SECTION 16: Other information

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification (Regulation (EC) No. 1272/2008)

Skin Corr. 1B	H314	Calculation method
Eye Dam. 1	H318	Calculation method
Carc. 1B	H350i	Calculation method
Aquatic Chronic 3	H412	Calculation method

Hazard statements listed in Chapter 2/3

H290	May be corrosive to metals.
H300	Fatal if swallowed.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
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.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H350i	May cause cancer by inhalation.
H360F	May damage fertility.
H400	Very toxic to aquatic life.

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H410

Very toxic to aquatic life with long lasting effects.

H412

Harmful to aquatic life with long lasting effects.

CLP categories listed in Chapter 2/3

Acute Tox. 2

Acute toxicity, Category 2

Acute Tox. 4

Acute toxicity, Category 4

Aquatic Acute 1

Hazardous to the aquatic environment, acute, Category 1

Aquatic Chronic 1

Hazardous to the aquatic environment, chronic, Category 1

Aquatic Chronic 3

Hazardous to the aquatic environment, chronic, Category 3

Carc. 1B

Carcinogenicity, Category 1B

Eye Dam. 1

Serious eye damage, Category 1

Eye Irrit. 2

Eye irritation, Category 2

Met. Corr. 1

Substance or mixture corrosive to metals, Category 1

Muta. 2

Germ cell mutagenicity, Category 2

Repr. 1B

Reproductive toxicity, Category 1B

Resp. Sens. 1

Respiratory sensitization, Category 1

Skin Corr. 1A

Skin corrosion, Category 1A

Skin Corr. 1B

Skin corrosion, Category 1B

Skin Irrit. 2

Skin irritation, Category 2

Skin Sens. 1

Skin sensitization, Category 1

STOT SE 3

Specific target organ toxicity - single exposure, Category 3

Supplemental information

Relevant changes compared with the previous version of the safety data sheet are marked with: ***

This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.