

**Gold Bath JE270-2 for Pen-Plating**

Revision date: 13.08.2019

Product code: 2150

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

Gold Bath JE270-2 for Pen-Plating

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

Plating agents and metal surface treating agents

**1.3. Details of the supplier of the safety data sheet**

Company name: Jentner Plating Technology GmbH  
Street: Johann-Staib-Strasse 2  
Place: D-75179 Pforzheim  
Telephone: +49 (0)7231 418094 0                      Telefax: +49 (0)7231 418094 77  
e-mail: info@jentner.de  
Contact person: Department of Chemistry  
Internet: www.jentner.de  
Responsible Department: Poison Information Center of the University of Freiburg.

**1.4. Emergency telephone number:** 0049 (0)761 19240 - 24 h german and english**Further Information**

BfR Produktnummer: 6265840

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Acute toxicity: Acute Tox. 2

Acute toxicity: Acute Tox. 3

Acute toxicity: Acute Tox. 4

Carcinogenicity: Carc. 1A

Reproductive toxicity: Repr. 1A

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Fatal in contact with skin.

Toxic if swallowed.

Harmful if inhaled.

May cause cancer by inhalation.

May damage fertility.

Toxic to aquatic life with long lasting effects.

**2.2. Label elements****Regulation (EC) No. 1272/2008****Hazard components for labelling**

salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex

Cobalt (II) citrate

**Signal word:** Danger**Pictograms:**



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**Hazard statements**

- H301 Toxic if swallowed.
- H310 Fatal in contact with skin.
- H332 Harmful if inhaled.
- H350i May cause cancer by inhalation.
- H360F May damage fertility.
- H411 Toxic to aquatic life with long lasting effects.

**Precautionary statements**

- P202 Do not handle until all safety precautions have been read and understood.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P262 Do not get in eyes, on skin, or on clothing.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
- P321 Specific treatment (see 4 on this label).
- P330 Rinse mouth.
- P302+P352 IF ON SKIN: Wash with plenty of water.
- P310 Immediately call a POISON CENTER/doctor.
- P361+P364 Take off immediately all contaminated clothing and wash it before reuse.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P312 Call a POISON CENTER/doctor if you feel unwell.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P391 Collect spillage.
- P405 Store locked up.

**Special labelling of certain mixtures**

- EUH208 Contains Cobalt (II) citrate. May produce an allergic reaction.

**SECTION 3: Composition/information on ingredients**

**3.2. Mixtures**

**Hazardous components**

CAS No	Chemical name	Quantity
	EC No      Index No      REACH No	
	GHS Classification	
-	salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex	max. 3%
	-      006-007-00-5	
	Acute Tox. 1, Acute Tox. 2, Acute Tox. 2, Aquatic Acute 1, Aquatic Chronic 1; H310 H330 H300 H400 H410 EUH032	
866-81-9	Cobalt (II) citrate	0,5 %
	212-751-3	
	Carc. 1A, Muta. 2, Repr. 1A, Resp. Sens. 1, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1; H350i H341 H360F H334 H317 H400 H410	

Full text of H and EUH statements: see section 16.

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**General information**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data)

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sheet if possible).

**After inhalation**

Move victim to fresh air. Put victim at rest and keep warm. Do not leave affected person unattended. After inhaling vapours, first symptoms of poisoning may develop hours later, so always consult a doctor.

**After contact with skin**

After contact with skin, wash immediately with plenty of water and soap. Put victim at rest, cover with a blanket and keep warm. Do not leave affected person unattended. In case of breathing difficulties administer oxygen. If victim is at risk of losing consciousness, position and transport on their side.

**After contact with eyes**

If product gets into the eye, keep eyelid open and rinse immediately with large quantities of water, for at least 5 minutes. Subsequently consult an ophthalmologist.

**After ingestion**

Never give anything by mouth to an unconscious person or a person with cramps. Rinse mouth immediately and drink plenty of water. Induce vomiting when the affected person is not unconscious. Call a physician immediately.

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

No information available.

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

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.  
Foam. Dry extinguishing powder. Carbon dioxide (CO<sub>2</sub>). Sand

**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

**Additional information**

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment as required.

**6.2. Environmental precautions**

Do not empty into drains; dispose of this material and its container in a safe way.

**6.3. Methods and material for containment and cleaning up**

Take up mechanically, placing in appropriate containers for disposal.  
Retain contaminated washing water and dispose it.

**6.4. Reference to other sections**

Safe handling: see section 7  
Personal protection equipment: see section 8  
Disposal: see section 13

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

When using do not eat, drink, smoke, sniff.

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**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep locked up and out of the reach of children.

**Hints on joint storage**

No special measures are necessary.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Additional advice on limit values**

To date, no national critical limit values exist.

**8.2. Exposure controls****Appropriate engineering controls**

Additional information on plant design: Ensure suitable suction / aeration at the workplace or on the machines.

**Protective and hygiene measures**

Remove contaminated, saturated clothing immediately. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Avoid contact with skin and eyes.

**Hand protection**

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Thorough skin-cleansing after handling the product. After cleaning apply high-fat content skin care cream.

**Skin protection**

Use personal protection equipment.

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

Physical state:	liquid
Colour:	light red
Odour:	none

pH-Value (at 20 °C):	4-5
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**Changes in the physical state**

Initial boiling point and boiling range:	ca. 100 °C
Sublimation point:	not determined
Thermal decomposition:	=>200 °C DIN 51556

**Explosive properties**

not explosive.

Lower explosion limits:

Upper explosion limits:

**Test method**

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**Oxidizing properties**

Not oxidising.

Density (at 20 °C):

1,02 g/cm<sup>3</sup>

Water solubility:

unlimited

**Solubility in other solvents**

not determined

Vapour density:

not determined

Evaporation rate:

not determined

Solvent separation test:

not applicable

**9.2. Other information**

Solid content:

not determined

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

No hazardous reaction when handled and stored according to provisions.

**10.2. Chemical stability**

No information available.

**10.3. Possibility of hazardous reactions**

No known hazardous reactions.

**10.5. Incompatible materials**

No known hazardous reactions.

**10.6. Hazardous decomposition products**

No information available.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Acute toxicity**

Fatal if swallowed.

Toxic in contact with skin or if inhaled.

**ATEmix calculated**

ATE (oral) 166,7 mg/kg; ATE (dermal) 166,7 mg/kg; ATE (inhalation vapour) 16,67 mg/l; ATE (inhalation aerosol) 1,667 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
-	salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex				
	oral	ATE 5 mg/kg			
	dermal	ATE 5 mg/kg			
	inhalation vapour	ATE 0,5 mg/l			
	inhalation aerosol	ATE 0,05 mg/l			
866-81-9	Cobalt (II) citrate				
	oral	LD50 6730 mg/kg	rat		

**Irritation and corrosivity**

Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

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### **Sensitising effects**

Enthält Tricobaltdicitrat. Kann allergische Reaktionen hervorrufen.

### **Carcinogenic/mutagenic/toxic effects for reproduction**

Kann bei Einatmen Krebs erzeugen. (Tricobaltdicitrat)

Kann die Fruchtbarkeit beeinträchtigen. (Tricobaltdicitrat)

Keimzell-Mutagenität: Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

### **STOT-single exposure**

Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

### **STOT-repeated exposure**

Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

### **Aspiration hazard**

Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

### **Additional information on tests**

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

## SECTION 12: Ecological information

### **12.2. Persistence and degradability**

There are no data available on the mixture itself.

### **12.3. Bioaccumulative potential**

not determined

### **12.4. Mobility in soil**

If product enters soil, it will be mobile and may contaminate groundwater.

### **12.5. Results of PBT and vPvB assessment**

Part of the components is biodegradable.

### **Further information**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

## SECTION 13: Disposal considerations

### **13.1. Waste treatment methods**

#### **Advice on disposal**

Refer to manufacturer or supplier for information on recovery or recycling.

#### **Waste disposal number of waste from residues/unused products**

110198 WASTES FROM CHEMICAL SURFACE TREATMENT AND COATING OF METALS AND OTHER MATERIALS; NON-FERROUS HYDRO-METALLURGY; wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphating, alkaline degreasing, anodising); other wastes containing hazardous substances; hazardous waste

#### **Contaminated packaging**

Handle contaminated packages in the same way as the substance itself.

Non-contaminated packages may be recycled.

## SECTION 14: Transport information

### **Land transport (ADR/RID)**

#### **14.1. UN number:**

UN 3287

#### **14.2. UN proper shipping name:**

TOXIC LIQUID, INORGANIC, N.O.S. (potassium dicyanoaurate(I), Tricobalt dicitrate)

#### **14.3. Transport hazard class(es):**

6.1

#### **14.4. Packing group:**

III

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Hazard label: 6.1



Classification code: T4  
 Special Provisions: 274  
 Limited quantity: 5 L  
 Excepted quantity: E1  
 Transport category: 2  
 Hazard No: 60  
 Tunnel restriction code: E

**Other applicable information (land transport)**

Special provisions: 274  
 : 2

**Inland waterways transport (ADN)**

**14.1. UN number:** UN 3287  
**14.2. UN proper shipping name:** TOXIC LIQUID, INORGANIC, N.O.S. (potassium dicyanoaurate(I), Tricobalt dicitrate)  
**14.3. Transport hazard class(es):** 6.1  
**14.4. Packing group:** III  
 Hazard label: 6.1



Classification code: T4  
 Special Provisions: 274 802  
 Limited quantity: 5 L  
 Excepted quantity: E1

**Marine transport (IMDG)**

**14.1. UN number:** UN 3287  
**14.2. UN proper shipping name:** TOXIC LIQUID, INORGANIC, N.O.S. (potassium dicyanoaurate(I), cobalt citrate)  
**14.3. Transport hazard class(es):** 6.1  
**14.4. Packing group:** III  
 Hazard label: 6.1



Special Provisions: 223, 274  
 Limited quantity: 5 L  
 Excepted quantity: E1  
 EmS: F-A, S-A

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number:** UN 3287  
**14.2. UN proper shipping name:** TOXIC LIQUID, INORGANIC, N.O.S. (potassium dicyanoaurate(I), cobalt citrate)  
**14.3. Transport hazard class(es):** 6.1  
**14.4. Packing group:** III

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Hazard label:

6.1



Special Provisions:

A3 A4 A137

Limited quantity Passenger:

2 L

Passenger LQ:

Y642

Excepted quantity:

E1

IATA-packing instructions - Passenger:

655

IATA-max. quantity - Passenger:

60 L

IATA-packing instructions - Cargo:

663

IATA-max. quantity - Cargo:

220 L

**Other applicable information (air transport)**

Special provisions: A3 A4 A137

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: yes

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulatory information**

Employment restrictions:

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D):

3 - highly water contaminating

**15.2. Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 16: Other information****Changes**

This data sheet contains changes from the previous version in section(s): 2,3,4,5,6,7,8,9,10,11,12,14,15.

**Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]**

Classification	Classification procedure
Acute Tox. 2; H310	Calculation method
Acute Tox. 3; H301	Calculation method
Acute Tox. 4; H332	Calculation method
Carc. 1A; H350i	Calculation method
Repr. 1A; H360F	Calculation method
Aquatic Chronic 2; H411	Calculation method

**Relevant H and EUH statements (number and full text)**

H300	Fatal if swallowed.
H301	Toxic if swallowed.
H310	Fatal in contact with skin.



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H317	May cause an allergic skin reaction.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341	Suspected of causing genetic defects.
H350i	May cause cancer by inhalation.
H360F	May damage fertility.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
EUH032	Contact with acids liberates very toxic gas.
EUH208	Contains Cobalt (II) citrate. May produce an allergic reaction.

**Further Information**

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations. The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*