

Jentner Plating Technology GmbH
Safety Data Sheet

according to Regulation (EC) No 1907/2006

JENTNER
PLATING TECHNOLOGY

Gold Plating Bath JE218 - RED

Print date: 27.01.2015

Product code: 129

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

1.1. Product identifier

Gold Plating Bath JE218 - RED

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: Sandweg 20
Place: D-75179 Pforzheim
Telephone: +49 (0)7231 418094 0 Telefax: +49 (0)7231 418094 77
e-mail: info@jentner.de
Contact person: Chemistry Department.
Internet: www.jentner.de
Responsible Department: The respondent department 0049 7231 280980 is reachable at our usual opening times on Mo-Fr between 08:00 am and 05:00 pm

Poison Information Center of the University of Freiburg.

1.4. Emergency telephone number:

0049 (0)761 19240 - 24 h german and english

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Indications of danger: T+ - Very toxic, N - Dangerous for the environment

R phrases:

Very toxic by inhalation, in contact with skin and if swallowed.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazard categories:

Acute toxicity: Acute Tox. 2

Acute toxicity: Acute Tox. 1

Acute toxicity: Acute Tox. 2

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

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

Toxic to aquatic life with long lasting effects.

2.2. Label elements

Hazardous components which must be listed on the label

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

Signal word: Danger

Pictograms: GHS06-GHS09





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Hazard statements

- H300+H310+H330 Fatal if swallowed, in contact with skin or if inhaled.
- H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P262 Do not get in eyes, on skin, or on clothing.
- P264 Wash hands and face thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P284 Wear respiratory protection.
- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
- P321 Specific treatment (see 4.1 on this label).
- P330 Rinse mouth.
- P302+P350 IF ON SKIN: Gently wash with plenty of soap and water.
- P310 Immediately call a POISON CENTER/doctor.
- P322 Specific measures (see 4.1 on this label).
- P361 Take off immediately all contaminated clothing.
- P363 Wash contaminated clothing before reuse.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P310 Immediately call a POISON CENTER/doctor.
- P320 Specific treatment is urgent (see 4.1 on this label).
- P391 Collect spillage.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up.
- P501 Dispose of contents/container to an officially registered waste disposal company .

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
-	salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex	15-25 %
-	T+ - Very toxic, N - Dangerous for the environment R26/27/28-32-50-53	
006-007-00-5	Acute Tox. 2, Acute Tox. 1, Acute Tox. 2, Aquatic Acute 1 (M-Factor = 1), Aquatic Chronic 1 (M-Factor = 1); H330 H310 H300 H400 H410 EUH032	

Full text of R-, H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

The following first aid and treatment recommendations should already be available to all first responders and doctors, before the work with cyanides. It can be used for First Aid performance. Act quickly and keep calm. Self-respect. Remove soiled or soaked clothing immediately and dispose safely. Leave the danger area. Possible signs of poisoning: headache, dizziness, drowsiness, nausea, convulsions, unconsciousness, respiratory disorders, respiratory arrest, cardiac arrest. dispose of

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safely. Concerned from the danger area. Possible signs of poisoning: headache, dizziness, drowsiness, nausea, convulsions, unconsciousness, respiratory disorders, respiratory arrest, cardiac arrest.

After inhalation

After inhalation of aerosols or exhalation out of solutions: Transport the injured below self protection out of the danger zone into fresh air. Keep injured calm, protect against hypothermia. Call the doctor immediately to the accident location. Bring the patient into a half seated position. By unconsciousness and existing breath recovery position. No mouth-to-mouth resuscitation by apnoea. Instead of this ventilate through respiratory mask with oxygen. By unconscious person concerned with (still) self-contained breath is immediately a through breaking off opened Isoamylnitrit-smell ampoule 30 seconds in two minutes interval close to the nare, so that the alexipharmic nitrite can be inhaled; bluish discolouration of lips and skin can be visible after a few minutes.

After contact with skin

After contact with skin, wash immediately with: Water and soap.
In case of skin reactions, consult a physician.

After contact with eyes

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

After ingestion

Contamination through swallowing: Call immediately the emergency doctor (tel.112) under the keyword prussic acid contamination. Let immediately swallow three spoons of activated carbon with water, provided the consciousness is conserved.

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

Symptoms of poisoning may develop several hours following exposure. Victim should be under medical observation for at least 48 hours after exposure.

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

Treatment as for cyanide poisoning. Attend attached additional text note. Eye Contact: Therapy as alkali burn. .

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Extinguishing powder. Water spray. Carbon dioxide (CO₂).

Unsuitable extinguishing media

Strong water jet

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.
Remove persons to safety.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. 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

Provide adequate ventilation. Retain contaminated washing water and dispose it. Treat the recovered material as prescribed in the section on waste disposal.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Provide adequate ventilation as well as local exhaustion at critical locations. Keep only in the original container in a cool, well-ventilated place.

Advice on protection against fire and explosion

Non-combustible liquids

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place.

Advice on storage compatibility

Do not store together with acids.

Further information on storage conditions

Keep locked up and out of reach of children.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls

Protective and hygiene measures

All specified safeguards are strictly observed. When using do not eat, drink, smoke or take drugs. In case of contact with skin, wash immediately with plenty of water. Wash hands and face before breaks. Preventive skin protection recommended. In case of exceeding limits at the workplace and / or larger amounts are released (leakage, spilling, etc.) the indicated respiratory protection should be used. Do not breathe dust. Avoid contact with skin, eyes and clothing. With possibility of contact of the skin or eyes, the indicated hand / eye / body protection should be used. Separate storage of clothes.

Eye/face protection

Framed glasses.

Hand protection

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.

Respiratory protection

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	blue
Odour:	Bitter almonds / Ammonia.

Test method

pH-Value (at 20 °C):	10,5-11,5
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Changes in the physical state

Initial boiling point and boiling range:	>90 °C
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Sublimation point:	not determined
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Explosive properties

not explosive.

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Oxidizing properties

Not oxidizing.

Vapour pressure:

not determined

Density:

1,150 g/cm³

Water solubility:

highly soluble.

Solubility in other solvents

not determined

Partition coefficient:

not determined

Viscosity / dynamic:

not determined

Flow time:

not determined

Vapour density:

not determined

Evaporation rate:

not determined

Solvent separation test:

not applicable

SECTION 10: Stability and reactivity

10.2. Chemical stability

not determined

10.3. Possibility of hazardous reactions

Contact with acids releases toxic gases.

10.4. Conditions to avoid

Gas/vapours, harmful.

10.5. Incompatible materials

Acid

10.6. Hazardous decomposition products

Hydrocyanic acid (hydrocyanic acid).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

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

CAS No	Chemical name	Exposure routes	Method	Dose	Species	Source
-	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		
		inhalative vapour	ATE	0,5 mg/l		
		inhalative aerosol	ATE	0,05 mg/l		

Irritation and corrosivity

corrosive.

Severe effects after repeated or prolonged exposure

Harmful: danger of serious damage to health by prolonged exposure in contact with skin.

SECTION 12: Ecological information

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12.1. Toxicity

In inshore waters also toxic for fishes and water organisms.

12.2. Persistence and degradability

not determined

12.3. Bioaccumulative potential

not determined

12.4. Mobility in soil

not determined

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal number of waste from residues/unused products

110113 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); degreasing wastes containing dangerous substances
Classified as hazardous waste.

Contaminated packaging

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

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: 1935
14.2. UN proper shipping name: CYANIDE SOLUTION, N.O.S. (Potassium cyanide, copper cyanide)
14.3. Transport hazard class(es): 6.1
14.4. Packing group: II
Hazard label: 6.1



Classification code: T4
Special Provisions: 274 525
Limited quantity: 100 mL
Transport category: 2
Hazard No: 60
Tunnel restriction code: D/E

Other applicable information (land transport)

E4

Inland waterways transport (ADN)

14.1. UN number: 1935
14.2. UN proper shipping name: CYANIDE SOLUTION, N.O.S. (Potassium cyanide, copper cyanide)
14.3. Transport hazard class(es): 6.1
14.4. Packing group: II
Hazard label: 6.1

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Classification code: T4
Special Provisions: 274 525 802
Limited quantity: 100 mL

Other applicable information (inland waterways transport)

E4

Marine transport (IMDG)

14.1. UN number: 1935
14.2. UN proper shipping name: CYANIDE SOLUTION, N.O.S. (Potassium cyanide, copper cyanide)
14.3. Transport hazard class(es): 6.1
14.4. Packing group: II
Hazard label: 6.1



Marine pollutant: P
Special Provisions: 274
Limited quantity: 100 mL
EmS: F-A, S-A

Other applicable information (marine transport)

E4

Air transport (ICAO)

14.1. UN number: 1935
14.2. UN proper shipping name: CYANIDE SOLUTION, N.O.S. (Potassium cyanide, copper cyanide)
14.3. Transport hazard class(es): 6.1
14.4. Packing group: II
Hazard label: 6.1



Special Provisions: A3
Limited quantity Passenger: 1 L
IATA-packing instructions - Passenger: 654
IATA-max. quantity - Passenger: 5 L
IATA-packing instructions - Cargo: 661
IATA-max. quantity - Cargo: 60 L

Other applicable information (air transport)

E4

: Y641

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: yes



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SECTION 15: Regulatory information

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

National regulatory information

Employment restrictions: Observe employment restrictions for young people.
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

Relevant R-phrases (Number and full text)

26/27/28 Very toxic by inhalation, in contact with skin and if swallowed.
32 Contact with acids liberates very toxic gas.
50 Very toxic to aquatic organisms.
53 May cause long-term adverse effects in the aquatic environment.

Relevant H- and EUH-phrases (Number and full text)

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

Further Information

This information is based on the present state of knowledge, but they do not constitute a guarantee of product properties and establishes no contract legal rights. Existing laws and regulations are followed by the recipient of our products on their own responsibility. This MSDS contains only safety-related information and does not replace any information or product specifications.

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