

Pre Gold Bath - JE285

Revision date: 11.11.2019

Product code: 65

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

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

Metal surface treatment products

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: 6271258

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

Hazard categories:

Substance or mixture corrosive to metals: Met. Corr. 1

Acute toxicity: Acute Tox. 4

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Corr. 1

Serious eye damage/eye irritation: Eye Dam. 1

Carcinogenicity: Carc. 1B

Hazardous to the aquatic environment: Aquatic Chronic 1

Hazard Statements:

May be corrosive to metals.

Harmful if swallowed.

Harmful in contact with skin.

Causes severe skin burns and eye damage.

Causes serious eye damage.

May cause cancer by inhalation.

Very toxic to aquatic life with long lasting effects.

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

sulphuric acid 96 %

Potassium tetracyanoaurate(III)

cobalt sulfate

Signal word: Danger

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Pictograms:**Hazard statements**

H290	May be corrosive to metals.
H302+H312	Harmful if swallowed or in contact with skin.
H314	Causes severe skin burns and eye damage.
H350i	May cause cancer by inhalation.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements

P234	Keep only in original packaging.
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+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P312	Call a POISON CENTER/doctor if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of water.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P312	Call a POISON CENTER/doctor if you feel unwell.
P362+P364	Take off contaminated clothing and wash it before reuse.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310	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.
P310	Immediately call a POISON CENTER/doctor.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P405	Store locked up.
P406	Store in a corrosion-resistant container with a resistant inner liner.

Special labelling of certain mixtures

EUH208	Contains cobalt sulfate. May produce an allergic reaction. Restricted to professional users.
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2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.2. Mixtures**

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Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
7664-93-9	sulphuric acid 96 %			max. 3 %
	231-639-5	016-020-00-8		
	Skin Corr. 1A; H314			
14263-59-3	Potassium tetracyanoaurate(III)			0,5 %
	238-145-9			
	Met. Corr. 1, Acute Tox. 1, Acute Tox. 2, Acute Tox. 2, Skin Irrit. 2, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1 (M-Factor = 100); H290 H310 H330 H300 H315 H318 H400 H410 EUH032			
10124-43-3	cobalt sulfate			<1 %
	233-334-2	027-005-00-0		
	Carc. 1B, Muta. 2, Repr. 1B, Acute Tox. 4, Resp. Sens. 1, Skin Sens. 1, Aquatic Acute 1 (M-Factor = 10), Aquatic Chronic 1 (M-Factor = 10); H350i H341 H360F H302 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**

Immediately remove any wetted clothing, shoes or stockings. Self-protection of the first aider

Wash contaminated clothing prior to re-use.

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

After inhalation

Provide fresh air. If breathing is irregular or stopped, administer artificial respiration.

After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

After contact with eyes

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

After ingestion

Observe risk of aspiration if vomiting occurs. Rinse mouth thoroughly with water. Call a physician in any case!

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

corrosive.

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. Water spray. Foam. Carbon dioxide. Extinguishing powder.

5.2. Special hazards arising from the substance or mixture

Non-flammable.

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5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

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**

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal. Take up mechanically, placing in appropriate containers for disposal.

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**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Handle and open container with care.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

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

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations. Unsuitable container/equipment material: Metal. Keep only in the original container in a cool, well-ventilated place.

Hints on joint storage

No special measures are necessary.

7.3. Specific end use(s)

Metal surface treatment products

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
7664-93-9	Sulphuric acid (mist)	-	0.05		TWA (8 h)	WEL

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DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
14263-59-3	Potassium tetracyanoaurate(III)		
Worker DNEL, long-term			0,05 mg/kg bw/day
Worker DNEL, acute			4,5 mg/kg bw/day

PNEC values

CAS No	Substance	
Environmental compartment	Value	
14263-59-3	Potassium tetracyanoaurate(III)	
Freshwater	0,00003 mg/l	

8.2. Exposure controls**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. Do not eat, drink, smoke or sneeze at the workplace. Avoid contact with skin and eyes.

Eye/face protection

Wear eye protection/face protection.

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. After cleaning apply high-fat content skin care cream. Thorough skin-cleansing after handling the product.

Skin protection

Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

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

Physical state:	liquid	
Colour:	red violet	
Odour:	odourless	
pH-Value (at 20 °C):		1,6

Changes in the physical state

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Melting point:	not determined
Initial boiling point and boiling range:	ca. 98 °C
Sublimation point:	not determined
Flash point:	not determined
Flammability	
Solid:	not applicable
Gas:	not applicable
Explosive properties	
not explosive.	
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Auto-ignition temperature	
Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	not determined
Oxidizing properties	
Not oxidising.	
Vapour pressure:	not determined
Density (at 20 °C):	1,08 g/cm ³
Water solubility:	unlimited
Solubility in other solvents	
not determined	
Partition coefficient:	not determined
Viscosity / dynamic:	not determined
Viscosity / kinematic:	not determined
Flow time:	not determined
Vapour density:	not determined
Evaporation rate:	not determined
Solvent separation test:	not applicable

9.2. Other information

Solid content:	not determined
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SECTION 10: Stability and reactivity**10.1. Reactivity**

Corrosive to metals.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

No decomposition if used as directed.

10.5. Incompatible materials

Keep away from: Metal. Corrosive to metals

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10.6. Hazardous decomposition products

No known hazardous decomposition products.

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

Harmful if swallowed.

Harmful in contact with skin.

ATEmix calculated

ATE (oral) 1250,0 mg/kg; ATE (dermal) 1250,0 mg/kg

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
14263-59-3	Potassium tetracyanoaurate(III)				
	oral	LD50 5 mg/kg	Ratte		
	dermal	LD50 5 mg/kg	Rabbit		
	inhalation vapour	LC50 0,005 mg/l			
	inhalation aerosol	ATE 0,05 mg/l			
10124-43-3	cobalt sulfate				
	oral	ATE 500 mg/kg			

Irritation and corrosivity

Causes severe skin burns and eye damage.

Causes serious eye damage.

Sensitising effects

Contains cobalt sulfate. May produce an allergic reaction.

Carcinogenic/mutagenic/toxic effects for reproduction

May cause cancer by inhalation. (cobalt sulfate)

Germ cell mutagenicity: 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.

Additional information on tests

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

SECTION 12: Ecological information**12.1. Toxicity**

Preparation not tested.

12.2. Persistence and degradability

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

12.3. Bioaccumulative potential

not determined

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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

The product has not been tested.

12.6. Other adverse effects

No information available.

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****Disposal recommendations**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

List of Wastes Code - used product

110105 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); pickling acids; hazardous waste

Contaminated packaging

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself. Contaminated packages must be completely emptied and can be re-used following proper cleaning.

SECTION 14: Transport information**Land transport (ADR/RID)****14.1. UN number:**

UN 2922

14.2. UN proper shipping name:

CORROSIVE LIQUID, TOXIC, N.O.S. (Potassium tetracyanoaurate(III), Sulphuric acid)

14.3. Transport hazard class(es):

8

14.4. Packing group:

II

Hazard label:

8+6.1



Classification code:

CT1

Special Provisions:

274

Limited quantity:

1 L

Excepted quantity:

E2

Transport category:

2

Hazard No:

86

Tunnel restriction code:

E

Other applicable information (land transport)

Transport category: 2

Inland waterways transport (ADN)**14.1. UN number:**

UN 2922

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14.2. UN proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (Potassium tetracyanoaurate(III), Sulphuric acid)

14.3. Transport hazard class(es): 8

14.4. Packing group: II

Hazard label: 8+6.1



Classification code: CT1

Special Provisions: 274 802

Limited quantity: 1 L

Excepted quantity: E2

Marine transport (IMDG)

14.1. UN number: UN 2922

14.2. UN proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (Potassium tetracyanoaurate(III), Sulphuric acid)

14.3. Transport hazard class(es): 8

14.4. Packing group: II

Hazard label: 8+6.1



Special Provisions: 274

Limited quantity: 1 L

Excepted quantity: E2

EmS: F-A, S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 2922

14.2. UN proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (Potassium tetracyanoaurate(III), Sulphuric acid)

14.3. Transport hazard class(es): 8

14.4. Packing group: II

Hazard label: 8+6.1



Special Provisions: A3 A803

Limited quantity Passenger: 0.5 L

Passenger LQ: Y840

Excepted quantity: E2

IATA-packing instructions - Passenger: 851

IATA-max. quantity - Passenger: 1 L

IATA-packing instructions - Cargo: 855

IATA-max. quantity - Cargo: 30 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Warning: Toxic.

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14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

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

Authorisations (REACH, annex XIV):

Substances of very high concern, SVHC (REACH, article 59):
cobalt sulfate

Restrictions on use (REACH, annex XVII):

Entry 28: cobalt sulfate

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):

2 - clearly water contaminating

Skin resorption/Sensitization:

Causes allergic hypersensitivity reactions.

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): 2,4,5,7,8,11,12,14,15.

Abbreviations and acronymsADR: 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 Harmonized 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

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

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

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Acute Tox. 4; H302	Calculation method
Acute Tox. 4; H312	Calculation method
Skin Corr. 1; H314	On basis of test data
Eye Dam. 1; H318	On basis of test data
Carc. 1B; H350i	Calculation method
Aquatic Chronic 1; H410	Calculation method

Relevant H and EUH statements (number and full text)

H290 May be corrosive to metals.

H300 Fatal if swallowed.

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H302	Harmful if swallowed.
H302+H312	Harmful if swallowed or in contact with skin.
H310	Fatal in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal 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.
EUH032	Contact with acids liberates very toxic gas.
EUH208	Contains cobalt sulfate. May produce an allergic reaction.

Further Information

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.

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