

## Safety Data Sheet



### GT4PINK - READY TO USE THICK PLATING BATH 4G/L GOLD PINK COLOR

Safety Data Sheet dated 2/16/2023 version 4

Compliant with regulation (CE) n. 1907/2006 REACH, Annex II, and subsequent amendments introduced by Commission Regulation (EU) no. 2020/878

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

### 1.1. Product identifier

Mixture identification:

Trade name: GT4PINK - READY TO USE THICK PLATING BATH 4G/L GOLD PINK COLOR

Trade code: GT4PINK

Product type and use: READY TO USE PLATING BATH GOLD

Registration Number N/A

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

Recommended use: For electroplating industry

Uses advised against: N.A.

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

Company: LEGOR GROUP S.p.A.

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Competent person responsible for the safety data sheet: info@legor.com

### 1.4. Emergency telephone number

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## SECTION 2: Hazards identification



### 2.1. Classification of the substance or mixture

#### Regulation (EC) n. 1272/2008 (CLP)

Acute Tox. 4 Harmful if swallowed.  
Aquatic Chronic 3 Harmful to aquatic life with long lasting effects.  
Adverse physicochemical, human health and environmental effects:  
No other hazards

### 2.2. Label elements

#### Regulation (EC) No 1272/2008 (CLP):

#### Pictograms and Signal Words



Warning

#### Hazard statements

H302 Harmful if swallowed.  
H412 Harmful to aquatic life with long lasting effects.

#### Precautionary statements

P264 Wash ... Thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P273 Avoid release to the environment.  
P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor/... if you feel unwell.  
P330 Rinse mouth.  
P501 Dispose of container in accordance with international regulation.

#### Contains

Potassium dicyanoaurate (I)  
3-Aminopyridine  
Potassium dicyanoaurate (I) May produce an allergic reaction.

#### Special provisions according to Annex XVII of REACH and subsequent amendments:

None.

### 2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration  $\geq 0.1\%$   
Other Hazards: No other hazards

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

N.A.

### 3.2. Mixtures

Mixture identification: GT4PINK - READY TO USE THICK PLATING BATH 4G/L GOLD PINK COLOR

#### Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Numb.	Classification	Registration Number
< 5%	Citric acid	CAS:5949-29-1 EC:201-069-1	Eye Irrit. 2, H319	01-2119457026-42-xxxx
< 5%	edetic acid; (EDTA)	CAS:60-00-4 EC:200-449-4 Index:607-429-00-8	Eye Irrit. 2, H319	
< 5%	Copper (II) sulfate pentahydrate	CAS:7758-99-8 EC:231-847-6 Index:029-004-00-0	Acute Tox. 4, H302; Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 1, H410	01-2119520566-40
< 5%	Potassium dicyanoaurate (I)	CAS:13967-50-5 EC:237-748-4	Met. Corr. 1, H290; Eye Dam. 1, H318; Skin Irrit. 2, H315; Aquatic Chronic 1, H410; Acute Tox. 2, H300; Acute Tox. 2, H330; Skin Sens. 1, H317; Aquatic Acute 1, H400, M-Acute:1, M-Chronic:1, EUH032	01-2120130777-52-0005
< 5%	3-Aminopyridine	CAS:462-08-8 EC:207-322-2	Acute Tox. 3, H301; Acute Tox. 3, H311; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Aquatic Acute 1, H400; Aquatic Chronic 1, H410	

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

Wash immediately with water.

In case of Ingestion:

Give nothing to eat or drink.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

N.A.

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

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

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO2).

Extinguishing media which must not be used for safety reasons:

None in particular.

### 5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

### 5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

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## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

#### For emergency responders:

Wear personal protection equipment.

### 6.2. Environmental precautions

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

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

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

Suitable material for taking up: absorbing material, organic, sand

Wash with plenty of water.

### 6.4. Reference to other sections

See also section 8 and 13

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## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

### 7.2. Conditions for safe storage, including any incompatibilities

keep far from light; DZLEG\_006

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

### 7.3. Specific end use(s)

Recommendation(s)

None in particular

Industrial sector specific solutions:

None in particular

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## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Predicted No Effect Concentration (PNEC) values

Potassium dicyanoaurate Exposure Route: Fresh Water; PNEC Limit: 0.0002 mg/l

(I)

CAS: 13967-50-5

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 0.002 mg/l

Exposure Route: Marine water; PNEC Limit: 0.00002 mg/l

Exposure Route: STP; PNEC Limit: 6 mg/l

Exposure Route: Freshwater sediments; PNEC Limit: 0.33 mg/kg

Exposure Route: Marine water sediments; PNEC Limit: 0.033 mg/kg

Exposure Route: Terrestrial compartment; PNEC Limit: 0.067 mg/kg

#### Derived No Effect Level (DNEL) values

Potassium dicyanoaurate Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects

(I)

Worker Professional: 0.071 mg/m<sup>3</sup>

CAS: 13967-50-5

## 8.2. Exposure controls

Eye protection:

Basket eye glasses.

Protection for skin:

Safety shoes.; Lab coat.; Protective apron.

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Container device with compressed air (DIN EN 137).; Mask with filter "B", grey colour

Thermal Hazards:

N.A.

Environmental exposure controls:

N.A.

Hygienic and Technical measures

N.A.

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## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

**Physical State:** Liquid

**Color:** N.A.

**Odour:** Odourless

**Odour threshold:**

**pH:** 5,00

**Kinematic viscosity:** N.A.

**Melting point / freezing point:** N.A.

**Initial boiling point and boiling range:** N.A.

**Flash point:** N.A.

**Upper/lower flammability or explosive limits:** N.A.

**Vapour density:** N.A.

**Vapour pressure:** N.A.

**Relative density:** N.A.

**Solubility in water:** N.A.

**Solubility in oil:** N.A.

**Partition coefficient (n-octanol/water):** N.A.

**Nanoforms dispersion stability:**

**Auto-ignition temperature:** N.A.

**Decomposition temperature:** N.A.

**Flammability:** N.A.

**Particle characteristics:**

**Particle size:** N.A.

### 9.2. Other information

**VOC** N.A.

**Miscibility:** N.A.

**Conductivity:** N.A.

**Evaporation rate:** N.A.

**No other relevant information**

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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under normal conditions

### 10.2. Chemical stability

Data not available.

### 10.3. Possibility of hazardous reactions

None.

### 10.4. Conditions to avoid

Stable under normal conditions.

### 10.5. Incompatible materials

None in particular.

## 10.6. Hazardous decomposition products

None.

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## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Toxicological Information of the Preparation

a) acute toxicity	The product is classified: Acute Tox. 4(H302) LD50 Oral Rat 481 mg/kg - Copper (II) sulfate pentahydrate LD50 Skin Rat > 2000 mg/kg - Copper (II) sulfate pentahydrate LD50 Oral Rat 5400 mg/kg - Citric Acid Monohydrate LD50 Skin Rat > 2000 mg/kg - Citric Acid Monohydrate
b) skin corrosion/irritation	Not classified Based on available data, the classification criteria are not met
c) serious eye damage/irritation	Not classified Based on available data, the classification criteria are not met
d) respiratory or skin sensitisation	Not classified Based on available data, the classification criteria are not met
e) germ cell mutagenicity	Not classified Based on available data, the classification criteria are not met
f) carcinogenicity	Not classified Based on available data, the classification criteria are not met
g) reproductive toxicity	Not classified Based on available data, the classification criteria are not met
h) STOT-single exposure	Not classified Based on available data, the classification criteria are not met
i) STOT-repeated exposure	Not classified Based on available data, the classification criteria are not met
j) aspiration hazard	Not classified Based on available data, the classification criteria are not met

#### Toxicological information on main components of the mixture:

Copper (II) sulfate pentahydrate      a) acute toxicity      LD50 Oral Rat = 960 mg/kg

Potassium dicyanoaurate (I)      a) acute toxicity      LD50 Oral Rat = 29.2  
LD50 Skin Rat > 2000

3-Aminopyridine      a) acute toxicity      LD50 Oral Rat <= 50 mg/kg bw

#### Endocrine disrupting properties:

No endocrine disruptor substances present in concentration >= 0.1%

### 11.2. Information on other hazards

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## SECTION 12: Ecological information

### 12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

Harmful to aquatic life with long lasting effects.

#### List of Eco-Toxicological properties of the product

The product is classified: Aquatic Chronic 3(H412)

- a) Aquatic acute toxicity : LC50 Oncorhynchus mykiss 0.016 mg/l 96 - Copper (II) Sulfate pentahydrate
- a) Aquatic acute toxicity : EC50 Daphnia magna 0.18 mg/l 48 - Copper (II) Sulfate pentahydrate
- a) Aquatic acute toxicity : EC50 Pseudokirchneriella subcapitata 0.003 mg/l 72 - Copper (II) Sulfate

pentahydrate

b) Aquatic chronic toxicity : NOEC Algae 425 mg/l 192 - Citric Acid Monohydrate

### List of Eco-Toxicological properties of the components

Component	Ident. Numb.	Ecotox Data
Copper (II) sulfate pentahydrate	CAS: 7758-99-8 - EINECS: 231-847-6 - INDEX: 029-004-00-0	b) Aquatic chronic toxicity : NOEC Algae Lemna minor = 0.2 mg/l 96h - Fresh water  b) Aquatic chronic toxicity : NOEC Daphnia Daphnia magna - Newborn = 18.8 ug/l 21d - Fresh water  b) Aquatic chronic toxicity : NOEC Fish Acipenser transmontanus - Larva = 0.46 ug/l 53d - Fresh water
Potassium dicyanoaurate (I)	CAS: 13967-50-5 - EINECS: 237-748-4	a) Aquatic acute toxicity : LC50 Fish = 5.7 mg/l 96h  a) Aquatic acute toxicity : EC50 Shellfish Daphnia Magna > 0.2 mg/l 48h a) Aquatic acute toxicity : EC50 Algae = 30 mg/l 72h a) Aquatic acute toxicity : EC10 Algae = 6.4 mg/l 72h

No endocrine disruptor substances present in concentration  $\geq$  0.1%

### 12.2. Persistence and degradability

Component	Persistence/Degradability	Value	Notes:
Potassium dicyanoaurate (I)	Solubility in water	143000. mg/l 000	

### 12.3. Bioaccumulative potential

N.A.

### 12.4. Mobility in soil

N.A.

### 12.5. Results of PBT and vPvB assessment

No PBT Ingredients are present

### 12.6. Endocrine disrupting properties

### 12.7. Other adverse effects

N.A.

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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Recover if possible. In so doing, comply with the local and national regulations currently in force.

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## SECTION 14: Transport information



### 14.1. UN number or ID number

3082

### 14.2. UN proper shipping name

ADR-Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Copper (II) sulfate pentahydrate - Potassium dicyanoaurate (I))

IATA-Technical name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Copper(II) Sulfate Pentahydrate, Potassium Dicyanoaurate)

IMDG-Technical name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Copper(II) Sulfate Pentahydrate, Potassium Dicyanoaurate)

### 14.3. Transport hazard class(es)

ADR-Class: 9

IATA-Class: 9

IMDG-Class: 9

#### 14.4. Packing group

ADR-Packing Group: III

IATA-Packing group: III

IMDG-Packing group: III

#### 14.5. Environmental hazards

No

Environmental Pollutant: No

#### 14.6. Special precautions for user

Road and Rail (ADR-RID):

ADR-Label: 9

ADR - Hazard identification number: 90

ADR-Special Provisions: 274 335 375 601

ADR-Transport category (Tunnel restriction code): 3 (-)

Air (IATA):

IATA-Passenger Aircraft: 964

IATA-Cargo Aircraft: 964

IATA-Label: 9

IATA-Subsidiary hazards: -

IATA-Erg: 9L

IATA-Special Provisions: A97 A158 A197

Sea (IMDG):

IMDG-Stowage Code: Category A

IMDG-Stowage Note: -

IMDG-Subsidiary hazards: -

IMDG-Special Provisions: 274 335 969

IMDG-EMS: F-A, S-F

IMDG-MFAG: N/A

#### 14.7. Maritime transport in bulk according to IMO instruments

N.A.

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### SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) n. 2020/878

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Regulation (EU) n. 2016/918 (ATP 8 CLP)

Regulation (EU) n. 2016/1179 (ATP 9 CLP)

Regulation (EU) n. 2017/776 (ATP 10 CLP)

Regulation (EU) n. 2018/669 (ATP 11 CLP)

Regulation (EU) n. 2018/1480 (ATP 13 CLP)

Regulation (EU) n. 2019/521 (ATP 12 CLP)

Regulation (EU) n. 2020/217 (ATP 14 CLP)

Regulation (EU) n. 2020/1182 (ATP 15 CLP)

Regulation (EU) n. 2021/643 (ATP 16 CLP)

Regulation (EU) n. 2021/849 (ATP 17 CLP)

Regulation (EU) n. 2022/692 (ATP 18 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: 3



Restrictions related to the substances contained: 75  
Provisions related to directive EU 2012/18 (Seveso III):

N.A.

Regulation (EU) No 649/2012 (PIC regulation)

No substances listed

German Water Hazard Class.

Class 3: extremely hazardous.

SVHC Substances:

No data available

## 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

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## SECTION 16: Other information

Code	Description
EUH032	Contact with acids liberates very toxic gas.
H290	May be corrosive to metals.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
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.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Code	Hazard class and hazard category	Description
2.16/1	Met. Corr. 1	Substance or mixture corrosive to metals, Category 1
3.1/2/Inhal	Acute Tox. 2	Acute toxicity (inhalation), Category 2
3.1/2/Oral	Acute Tox. 2	Acute toxicity (oral), Category 2
3.1/3/Dermal	Acute Tox. 3	Acute toxicity (dermal), Category 3
3.1/3/Oral	Acute Tox. 3	Acute toxicity (oral), Category 3
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/1	Eye Dam. 1	Serious eye damage, Category 1
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
4.1/A1	Aquatic Acute 1	Acute aquatic hazard, category 1
4.1/C1	Aquatic Chronic 1	Chronic (long term) aquatic hazard, category 1
4.1/C3	Aquatic Chronic 3	Chronic (long term) aquatic hazard, category 3

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

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
3.1/4/Oral	Calculation method
4.1/C3	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and

constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor

BEI: Biological Exposure Index

BOD: Biochemical Oxygen Demand

CAS: Chemical Abstracts Service (division of the American Chemical Society).

CAV: Poison Center

CE: European Community

CLP: Classification, Labeling, Packaging.

CMR: Carcinogenic, Mutagenic and Reprotoxic

COD: Chemical Oxygen Demand

COV: Volatile Organic Compound

CSA: Chemical Safety Assessment

CSR: Chemical Safety Report

DMEL: Derived Minimal Effect Level

DNEL: Derived No Effect Level.

DPD: Dangerous Preparations Directive

DSD: Dangerous Substances Directive

EC50: Half Maximal Effective Concentration

ECHA: European Chemicals Agency

EINECS: European Inventory of Existing Commercial Chemical Substances.

ES: Exposure Scenario

GefStoffVO: Ordinance on Hazardous Substances, Germany.

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

IARC: International Agency for Research on Cancer

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

IC50: half maximal inhibitory concentration

ICAO: International Civil Aviation Organization.

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).

IMDG: International Maritime Code for Dangerous Goods.

INCI: International Nomenclature of Cosmetic Ingredients.

IRCCS: Scientific Institute for Research, Hospitalization and Health Care

KAFH: KAFH

KSt: Explosion coefficient.

LC50: Lethal concentration, for 50 percent of test population.

LD50: Lethal dose, for 50 percent of test population.

LDLo: Leathal Dose Low

N.A.: Not Applicable

N/A: Not Applicable

N/D: Not defined/ Not available

NA: Not available

NIOSH: National Institute for Occupational Safety and Health

NOAEL: No Observed Adverse Effect Level

OSHA: Occupational Safety and Health Administration.

PBT: Persistent, Bioaccumulative and Toxic

PGK: Packaging Instruction

PNEC: Predicted No Effect Concentration.

PSG: Passengers

RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.

STEL: Short Term Exposure limit.

STOT: Specific Target Organ Toxicity.

TLV: Threshold Limiting Value.

TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).

vPvB: Very Persistent, Very Bioaccumulative.

WGK: German Water Hazard Class.

**\* Sheet model entirely changed in compliance to regulatory update.**