

Safety Data Sheet



GT4PINK

Safety Data Sheet dated 6/15/2021 version 1

Compliant with regulation (CE) n. 1907/2006 REACH, Annex II, and subsequent amendments introduced by Commission Regulation (EU) no. 2015/830

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

1.1. Product identifier

Mixture identification:

Trade name: GT4PINK

Trade code: GT4PINK

Product type and use: Gold plating solution

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.

Via del Lavoro, 1

36050 Bressanvido (VI)

Italy

Tel.: +39.0444.467911

Fax.: +39.0444. 660677

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

1.4. Emergency telephone number

CENTRO ANTIVELENI OSPEDALE NIGUARDA CA' GRANDA

P.ZZA OSPEDALE MAGGIORE, 3 MILANO

Tel 02 66101029 Fax 02 64442768

AZIENDA OSPEDALIERA PAPA GIOVANNI XXIII PIAZZA OMS, 1 24127 BERGAMO

Tel 800 883300

CENTRO ANTIVELENI AZIENDA OSPEDALIERA S.G.BATTISTA -MOLINETTE DI TORINO

CORSO A.M. DOGLIOTTI, 14 TORINO

Tel 011 6637637 Fax 011 6672149

CEN.NAZ.INFORM.TOSSIC.FOND. S.MAUGERI CLINICA DEL LAVORO E DELLA RIABILITAZIONE

VIA A.FERRATA, 8 PAVIA

Tel A 0382 24444 Fax 02 64442769

SERV. ANTIV. - CEN.INTERDIPARTIMENTALE DI RICERCA SULLE INTOSSICAZIONI ACUTE DIP.DI FARMAC. E.MENEGHETTI UNIVERSITÀ DEGLI STUDI DI PADOVA

LARGO E.MENEGHETTI, 2 PADOVA

Tel 049 8275078 Fax 049 8270593

SERVIZIO ANTIVELENI SERV.PR.SOCC., ACCETT. E OSS. ISTITUTO SCIENTIFICO G. GASLINI

LARGO G. GASLINI, 5 GENOVA

Tel 010 5636245 Fax 010 3760873

CENTRO ANTIVELENI - U.O. TOSSICOLOGIA MEDICA AZIENZA OSPEDALIERA CAREGGI

VIALE G.B. MORGAGNI, 65 FIRENZE
Tel 055 4277238 Fax 055 4277925

CENTRO ANTIVELENI POLICLINICO A.GEMELLI - UNIVERSITA' CATTOLICA DEL SACRO CUORE
LARGO F.VITO, 1 ROMA
Tel 06 3054343 Fax 06 3051343

CENTRO ANTIVELENI - ISTITUTO DI ANESTESIOLOGIA E RIANIMAZIONE UNIVERSITÀ DEGLI STUDI DI ROMA LA SAPIENZA
VIALE DEL POLICLINICO, 155 ROMA
Tel 06 49970698 Fax 06 4461967

AZ. OSP. UNIV. FOGGIA
V.LE LUIGI PINTO, 1 71122 FOGGIA
Tel 0881 732326

CENTRO ANTIVELENI AZIENDA OSPEDALIERA A. CARDARELLI
VIA CARDARELLI, 9 NAPOLI
Tel 081 7472870 Fax 081 7472880

SECTION 2: Hazards identification



2.1. Classification of the substance or mixture

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

Acute Tox. 3 Toxic if inhaled.
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



Danger

Hazard statements

H331 Toxic if inhaled.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P311 Call a POISON CENTER/ doctor/...
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container in accordance with applicable regulations.

Contains

Potassium dicyanoaurate(I)

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

None

2.3. Other hazards

No PBT Ingredients are present

Other Hazards: No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: GT4PINK

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%	Copper (II) sulfate pentahydrate	CAS:7758-99-8 EC:231-847-6 Index:029-004-00-0	Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Aquatic Acute 1, H400; Aquatic Chronic 1, H410	01-2119520566-40
< 5%	Potassium dicyanoaurate(I)	CAS:13967-50-5	Acute Tox. 1, H330; Acute Tox. 3, H311, EUH032	

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.

In case of eyes contact:

Wash immediately with water.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and label hazardous.

In case of Inhalation:

If breathing is irregular or stopped, administer artificial respiration.

In case of inhalation, consult a doctor immediately and show him packing or label.

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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

See protective measures under point 7 and 8.

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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

Do not use on extensive surface areas in premises where there are occupants.

Use localized ventilation system.

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

Always keep in a well ventilated place.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Cool and adequately ventilated.

7.3. Specific end use(s)

Recommendation(s)

None in particular

Industrial sector specific solutions:

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No data available

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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State Liquid

Appearance and colour: Light Blue

Odour: Odourless
Odour threshold: N.A.
pH: 5,00
Melting point / freezing point: N.A.
Initial boiling point and boiling range: N.A.
Flash point: N.A.
Evaporation rate: 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.
Auto-ignition temperature: N.A.
Decomposition temperature: N.A.
Viscosity: N.A.
Explosive properties: N.A.
Oxidizing properties: N.A.
Solid/gas flammability: N.A.

9.2. Other information

VOC N.A.
Substance Groups relevant properties N.A.
Miscibility: N.A.
Conductivity: N.A.

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.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological Information of the Preparation

a) acute toxicity	The product is classified: Acute Tox. 3(H331) 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 = 960,00000 mg/kg

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: 029-004-00-0 - INDEX: 231-847-6	b) Aquatic chronic toxicity : NOEC Algae Lemna minor = 0,20000 mg/l 96h - Fresh water b) Aquatic chronic toxicity : NOEC Daphnia Daphnia magna - Newborn = 18,80000 ug/l 21d - Fresh water b) Aquatic chronic toxicity : NOEC Fish Acipenser transmontanus - Larva = 0,46000 ug/l 53d - Fresh water

12.2. Persistence and degradability

N.A.

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. Other adverse effects

N.A.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information



14.1. UN 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 Provisioning: A97 A158 A197

Sea (IMDG) :

IMDG-Stowage Code: Category A

IMDG-Stowage Note: -

IMDG-Subsidiary hazards: -

IMDG-Special Provisioning: 274 335 969

IMDG-Page: N/A

IMDG-Label: N/A

IMDG-EMS: F-A, S-F

IMDG-MFAG: N/A

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

N.A.

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. 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) 2015/830

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: None

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.

SECTION 16: Other information

Code	Description
EUH032	Contact with acids liberates very toxic gas.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic 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
3.1/1/Inhal	Acute Tox. 1	Acute toxicity (inhalation), Category 1
3.1/3/Dermal	Acute Tox. 3	Acute toxicity (dermal), Category 3
3.1/3/Inhal	Acute Tox. 3	Acute toxicity (inhalation), Category 3
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
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 Classification procedure

(EC) Nr. 1272/2008

3.1/3/Inhal

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.