



## Safety Data Sheet

ITEM# 80-001

Safety Data Sheet dated 18/6/2019, version 1

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

- 1.1. Product identifier  
Mixture identification: ITEM# 80-001  
Trade name: LEGOR 24 KT YELLOW GOLD MICRON SOLUTION  
Trade code: AP032-332
- 1.2. Relevant identified uses of the substance or mixture and uses advised against
- 1.3. Details of the supplier  
Romanoff International Supply Corporation  
9 Deforest Street  
Amityville, NY 11701 US  
Tel: 631-842-2400

1.4. Emergency telephone number CHEM TEL, Account# MIS4594445

United States; Canada, Puerto Rico & U.S. Virgin Islands: 1-800-255-3924,  
Australia: 1-300-954-583, Brasil: 0-800-591-6042, China: 400-120-0751, India: 000-800-100-4086,  
Mexico: 800-099-0731 ALL OTHER COUNTRIES: 1-813-248-0585

### SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture  
EC regulation criteria 1272/2008 (CLP)
- ⚠ Danger, Carc. 1B, May cause cancer.
  - ⚠ Danger, Repr. 1B, May damage fertility or the unborn child.
  - ⚠ Aquatic Chronic 2, Toxic to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

- H350 May cause cancer.  
H360 May damage fertility or the unborn child.  
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements:

- P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P308+P313 IF exposed or concerned: Get medical advice/attention.

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P391 Collect spillage.

Special Provisions:  
 PROF RESTRICTED TO PROFESSIONAL USERS.

Contains  
 Cobalt sulphate heptahydrate

Special provisions according to Annex XVII of REACH and subsequent amendments:  
 None

2.3. Other hazards  
 vPvB Substances: None - PBT Substances: None

Other Hazards:  
 No other hazards

### SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

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

Qty	Name	Ident. Number	Classification
>= 0.25% - < 0.5%	Cobalt sulphate heptahydrate	Index number: 027-005-00-0 CAS: 10026-24-1 EC: 600-050-9	⚠ 3.6/1B Carc. 1B H350 ⚠ 3.5/2 Muta. 2 H341 ⚠ 3.7/1B Repr. 1B H360 ⚠ 3.4.1/1-1A-1B Resp. Sens. 1,1A, 1B H334 ⚠ 3.4.2/1-1A-1B Skin Sens. 1,1A, 1B H317 ⚠ 4.1/A1 Aquatic Acute 1 H400 M=10. ⚠ 4.1/C1 Aquatic Chronic 1 H410 M=10. ⚠ 3.1/4/Oral Acute Tox. 4 H302 Specific Concentration Limits: C >= 0,01%: Carc. 1B H350i
>= 0.25% - < 0.5%	Potassium dicyanoaurate(I)	CAS: 13967-50-5	⚠ 3.1/2/Inhal Acute Tox. 2 H330 ⚠ 3.1/3/Dermal Acute Tox. 3 H311 ⚠ 3.1/3/Oral Acute Tox. 3 H301 EUH032

SVHC Substances:

>= 0.25% - < 0.5% Cobalt sulphate heptahydrate  
 Index number: 027-005-00-0, CAS: 10026-24-1, EC: 600-050-9  
 Substance SVHC

### SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

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 with plenty of water and soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

In case of eyes contact:

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

In case of Ingestion:

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Do NOT induce vomiting.

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

None

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).

Treatment:

None

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#### SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO<sub>2</sub>).

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.

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

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.

Exercise the greatest care when handling or opening the container.

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 away from food, drink and feed.

Incompatible materials:



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None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

None in particular

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#### SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Cobalt sulphate heptahydrate - CAS: 10026-24-1

ACGIH - TWA(8h): 0.02 mg/m<sup>3</sup>

DNEL Exposure Limit Values

N.A.

PNEC Exposure Limit Values

N.A.

8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

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

Respiratory protection:

Use adequate protective respiratory equipment.

Thermal Hazards:

None

Environmental exposure controls:

None

Appropriate engineering controls:

None

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#### SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Appearance and colour:	Red liquid	--	--
Odour:	Typical	--	--
Odour threshold:	N.A.	--	--
pH:	3.5	--	--
Melting point / freezing point:	n/a	--	--
Initial boiling point and boiling range:	n/a	--	--
Flash point:	n/a ° C	--	--
Evaporation rate:	N.A.	--	--
Solid/gas flammability:	n/a	--	--
Upper/lower flammability	N.A.	--	--

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or explosive limits:			
Vapour pressure:	n/a	--	--
Vapour density:	n/a	--	--
Relative density:	1,05	--	--
Solubility in water:	Total	--	--
Solubility in oil:		--	--
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	--	--

#### 9.2. Other information

Properties	Value	Method:	Notes:
Miscibility:	N.A.	--	--
Fat Solubility:	N.A.	--	--
Conductivity:	N.A.	--	--
Substance Groups relevant properties	N.A.	--	--

## SECTION 10: Stability and reactivity

- 10.1. Reactivity
  - Stable under normal conditions
- 10.2. Chemical stability
  - Stable under normal conditions
- 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 product:

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- a) acute toxicity
    - Not classified
    - Based on available data, the classification criteria are not met
  - 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
    - The product is classified: Carc. 1B H350
  - g) reproductive toxicity
    - The product is classified: Repr. 1B H360
  - 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 of the main substances found in the product:  
Cobalt sulphate heptahydrate - CAS: 10026-24-1
- a) acute toxicity:
    - Test: LD50 - Route: Oral - Species: Rat = 424 mg/kg

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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.
- GT2A
  - The product is classified: Aquatic Chronic 2 - H411
- Cobalt sulphate heptahydrate - CAS: 10026-24-1
  - a) Aquatic acute toxicity:
    - Endpoint: LC50 - Species: Fish = 52.5 mg/l - Duration h: 96 - Notes: Terapon jaruba (Tigerfish)
    - Endpoint: EC50 - Species: Daphnia magna = 0.027 mg/l - Duration h: 48 - Notes: (Crustacei)
    - Endpoint: EC50 - Species: Algae = 10.2 mg/l - Duration h: 72 - Notes: Pheodactylum tricornutum (Diatom)
- 12.2. Persistence and degradability
  - None
  - Cobalt sulphate heptahydrate - CAS: 10026-24-1
  - Biodegradability: Solubility in water - Notes: > 10000 mg/l
- 12.3. Bioaccumulative potential
  - Cobalt sulphate heptahydrate - CAS: 10026-24-1
  - Bioaccumulation: Bioaccumulative - Test: BCF - Bioconcentration factor 400
- 12.4. Mobility in soil
  - N.A.

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- 12.5. Results of PBT and vPvB assessment  
vPvB Substances: None - PBT Substances: None
- 12.6. Other adverse effects  
None

#### 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  
ADR-UN Number: 3082  
IATA-UN Number: 3082  
IMDG-UN Number: 3082
- 14.2. UN proper shipping name  
ADR-Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (COBALT SULFATE)  
IATA-Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (COBALT SULFATE)  
IMDG-Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (COBALT SULFATE)
- 14.3. Transport hazard class(es)  
ADR-Class: 9  
ADR - Hazard identification number: 90  
IATA-Class: 9  
IATA-Label: 9  
IMDG-Class: 9  
IMDG-Class: Not dangerous for transportation
- 14.4. Packing group  
ADR-Packing Group: III  
IATA-Packing group: III  
IMDG-Packing group: III
- 14.5. Environmental hazards  
ADR-Environmental Pollutant: Yes  
IMDG-Marine pollutant: Marine Pollutant
- 14.6. Special precautions for user  
Rail (RID): Not dangerous for transportation  
ADR-Subsidiary risks: -  
ADR-S.P.: 274 335 375 601  
ADR-Transport category (Tunnel restriction code): 3 (-)  
IATA-Passenger Aircraft: 964  
IATA-Subsidiary risks: -  
IATA-Cargo Aircraft: 964  
IATA-S.P.: A97 A158 A197  
IATA-ERG: 9L  
IMDG-EmS: F-A , S-F  
IMDG-Subsidiary risks: -  
IMDG-Stowage and handling: Category A  
IMDG-Segregation: -
- 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code



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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) 2015/830
  - 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)

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

None

Where applicable, refer to the following regulatory provisions :

- Directive 2012/18/EU (Seveso III)
- Regulation (EC) nr 648/2004 (detergents).
- Dir. 2004/42/EC (VOC directive)

SVHC Substances:

Substances in candidate list (Art. 59 Reg. 1907/2006, REACH):

- Cobalt sulphate heptahydrate
- Carcinogenic, Toxic to reproduction

Provisions related to directive EU 2012/18 (Seveso III):

- Seveso III category according to Annex 1, part 1
- Product belongs to category: E2

15.2. Chemical safety assessment

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

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### SECTION 16: Other information

Text of phrases referred to under heading 3:

- H350 May cause cancer.
- H341 Suspected of causing genetic defects.
- H360 May damage fertility or the unborn child.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H317 May cause an allergic skin reaction.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H302 Harmful if swallowed.
- H350i May cause cancer by inhalation.
- H330 Fatal if inhaled.
- H311 Toxic in contact with skin.
- H301 Toxic if swallowed.
- EUH032 Contact with acids liberates very toxic gas.



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Hazard class and hazard category	Code	Description
Acute Tox. 2	3.1/2/Inhal	Acute toxicity (inhalation), Category 2
Acute Tox. 3	3.1/3/Dermal	Acute toxicity (dermal), Category 3
Acute Tox. 3	3.1/3/Oral	Acute toxicity (oral), Category 3
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Resp. Sens. 1,1A,1B	3.4.1/1-1A-1B	Respiratory Sensitisation, Category 1,1A,1B
Skin Sens. 1,1A,1B	3.4.2/1-1A-1B	Skin Sensitisation, Category 1,1A,1B
Muta. 2	3.5/2	Germ cell mutagenicity, Category 2
Carc. 1B	3.6/1B	Carcinogenicity, Category 1B
Repr. 1B	3.7/1B	Reproductive toxicity, Category 1B
Aquatic Acute 1	4.1/A1	Acute aquatic hazard, category 1
Aquatic Chronic 1	4.1/C1	Chronic (long term) aquatic hazard, category 1
Aquatic Chronic 2	4.1/C2	Chronic (long term) aquatic hazard, category 2

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
Carc. 1B, H350	Calculation method
Repr. 1B, H360	Calculation method
Aquatic Chronic 2, H411	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.

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

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

CAS: Chemical Abstracts Service (division of the American Chemical

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CLP:	Society).
DNEL:	Classification, Labeling, Packaging.
EINECS:	Derived No Effect Level.
GefStoffVO:	European Inventory of Existing Commercial Chemical Substances.
GHS:	Ordinance on Hazardous Substances, Germany.
IATA:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA-DGR:	International Air Transport Association.
ICAO:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO-TI:	International Civil Aviation Organization.
IMDG:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
INCI:	International Maritime Code for Dangerous Goods.
KSt:	International Nomenclature of Cosmetic Ingredients.
LC50:	Explosion coefficient.
LD50:	Lethal concentration, for 50 percent of test population.
PNEC:	Lethal dose, for 50 percent of test population.
RID:	Predicted No Effect Concentration.
STEL:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STOT:	Short Term Exposure limit.
TLV:	Specific Target Organ Toxicity.
TWA:	Threshold Limiting Value.
WGK:	Time-weighted average
	German Water Hazard Class.