

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

• **1.1 Product identifier:**

- Trade name: **HARD GOLD PLATE SOLUTION**
- Article number: **0970C, 1870C, 2774C, 9658C**

• **1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

- **Application of the substance / the mixture** Raw material for plating baths.

• **1.3 Details of the supplier of the safety data sheet**

- **Manufacturer/Supplier:** ALISCO COMPANY
PO BOX 6166, WARWICK CV34 9PN. UK
Tel. +44 1926 359930
Email: sales@alisco.co.uk

- **1.4 Emergency telephone number:** 07775 523332 (OFFICE HOURS ONLY)

SECTION 2: Hazards identification

• **2.1 Classification of the substance or mixture**

- **Classification according to Regulation (EC) No 1272/2008**



GHS06 skull and crossbones

Acute Tox. 3 H311 Toxic in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 health hazard

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4

H302 Harmful if swallowed.

Eye Irrit. 2

H319 Causes serious eye irritation.

Skin Sens. 1

H317 May cause an allergic skin reaction.

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2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

• **Hazard pictograms** GHS06, GHS08, GHS09

• **Signal word** Danger

Hazard-determining components of labelling:

potassium dicyanoaurate(I)

nickel sulphate hexahydrate

cobalt sulphate heptahydrate

Hazard statements

H302 Harmful if swallowed.

H311 + H331 Toxic in contact with skin or if inhaled.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H373 May cause damage to organs through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 Specific treatment.

P405 Store locked up.

P501 Dispose of contents/container in accordance with national regulations.

2.3 Other hazards

Results of PBT and vPvB assessment

• **PBT:** Not applicable.

• **vPvB:** Not applicable

SECTION 3. Composition/information on ingredients

3.1 Chemical characterisation: Substances

CAS No. Description

13967-50-5 potassium dicyanoaurate(I) <7%

• **Identification number(s)**

• **EC number:** 237-748-4

3.2 Chemical characterisation: Mixtures

• **Description:** Mixture of substances listed below with nonhazardous additions.

• **Dangerous components:**

organic compound



Eye Irrit. 2,

H319; STOT SE 3, H335

2.5-10%

organic acid



Eye Irrit. 2, H319

2.5-10%

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CAS: 13967-50-5 potassium dicyanoaurate(I) ≤2.5%



EINECS: 237-748-4 Acute Tox. 1, H300; Acute Tox. 1, H310; Acute Tox.1




H330; Aquatic Acute 1, H400; Aquatic Chronic 1, H410

CAS: 10026-24-1 cobalt sulphate heptahydrate ≤2.5%



Resp. Sens. 1, H334; Muta. 2, H341; Carc. 1B, H350i; Repr.


1B, H360F;  Aquatic Acute 1, H400; Aquatic Chronic 1,


H410;  Acute Tox. 4, H302; Skin Sens. 1, H317

CAS: 10101-97-0 nickel sulphate hexahydrate ≤2.5%



EINECS: 232-104-9 Resp. Sens. 1, H334; Muta. 2, H341; Carc. 1A, H350i; Repr.

1B, H360D; STOT RE 1, H372;  Aquatic Acute 1, H400;

Aquatic Chronic 1, H410;  Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Irrit. 2, H315; Skin Sens. 1, H317

• SVHC

10026-24-1 cobalt sulphate heptahydrate

• **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

• 4.1 Description of first aid measures

• General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

• After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably inside position for transportation.

• **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

• **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

• **After swallowing:** Call for a doctor immediately.

• **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

• **4.3 Indication of any immediate medical attention and special treatment needed** No relevant information available.

SECTION 5. Firefighting measures

• 5.1 Extinguishing media

Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.

• **5.2 Special hazards arising from the substance or mixture** No further relevant information available.

• 5.3 Advice for firefighters

• **Protective equipment:** Mouth respiratory protective device.

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SECTION 6. Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
No special measures required.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
13967-50-5 potassium dicyanoaurate(I)
WEL (Great Britain) Long-term value: 5 mg/m³
as CN; Sk
MAK (Germany) Long-term value: 2E mg/m³
als CN
10101-97-0 nickel sulphate hexahydrate
MAK (Germany) einatembare Fraktion; vgl.Abschn.XII
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**

• **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing
 Wash hands before breaks and at the end of work.
 Store protective clothing separately.
 Avoid contact with the eyes and skin.

• **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

• **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
 Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

• **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

• **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be Observed.

• **Eye protection:**



Tightly sealed goggles

SECTION 9. Physical and chemical properties

• **9.1 Information on basic physical and chemical properties**

• **General Information**

• **Appearance:**

Form: Fluid
Colour: According to product specifications, green or clear

• **Odour:** Characteristic;

• **Odour threshold:** Not determined.

• **pH-value:** Not Applicable.

• **Change in condition**

Melting point/freezing point: Undetermined.

Initial boiling point & boiling range: Undetermined.

• **Flash point:** Not applicable.

• **Flammability (solid, gas):** Not applicable.

• **Decomposition temperature:** Not determined.

• **Auto-ignition temperature:** Product is not self-igniting.

• **Explosive properties:** Product does not present an explosion hazard.

• **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

• **Vapour pressure:** Not determined.

· Density	Not determined.
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not determined.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
VOC (EC)	0.00 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed
Toxic in contact with skin or if inhaled.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Causes serious eye irritation.
- **Respiratory or skin sensitisation** May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** 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**
May cause damage to organs through prolonged or repeated exposure.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information



- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 3 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN-Number**
 - **ADR, IMDG, IATA** UN3082
 - **14.2 UN proper shipping name**
 - **ADR** **3082** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (potassium dicyanoaurate(I), nickel sulphate hexahydrate)
 - **IMDG** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (potassium dicyanoaurate(I), nickel sulphate hexahydrate), MARINE POLLUTANT
 - **IATA** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (potassium dicyanoaurate(I), nickel sulphate hexahydrate)
 - **14.3 Transport hazard class(es)**
 - **ADR**
- 

- **Class** 9 (M6) Miscellaneous dangerous substances and articles.
 - **Label** 9

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• IMDG



• IMDG

• Class

• Label

9 Miscellaneous dangerous substances and articles.

9

• IATA



• Class

• Label

9 Miscellaneous dangerous substances and articles.

9

• 14.4 Packing group

• ADR, IMDG, IATA

III

• 14.5 Environmental hazards:

Product contains environmentally hazardous substances:

potassium dicyanoaurate(I)

Symbol (fish and tree)

Symbol (fish and tree)

• Special marking (ADR):

• Special marking (IATA):

• 14.6 Special precautions for user

Warning; Miscellaneous dangerous substances and articles.

• Danger code (Kemler):

90

• EMS Number:

F-A,S-F

• Segregation groups

Cyanides

• Stowage Category

A

• 14.7 Transport in bulk according to Annex II of

Marpol and the IBC Code

Not applicable.

• Transport/Additional information:

• ADR

• Limited quantities (LQ)

5L

• Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000ml

3

• Transport category

• IMDG

• Limited quantities (LQ)

5L

• Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000ml

• UN "Model Regulation":

UN 3082 ENVIRONMENTALLY HAZARDOUS

SUBSTANCE, LIQUID, N.O.S. (POTASSIUM

DICYANOAUATE(I), NICKEL SULPHATE

HEXAHYDRATE), 9, III

SECTION 15: Regulatory information

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

• Directive 2012/18/EU

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- **Named dangerous substances -** ANNEX I None of the ingredients is listed.
- **Seveso category**
H2 ACUTE TOXIC
E2 Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t

- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 27

- **National regulations:**
- **Other regulations, limitations and prohibitive regulations**
- **Substances of very high concern (SVHC) according to REACH, Article 57**
10026-24-1 cobalt sulphate heptahydrate
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16. Other information

This

information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
H300 Fatal if swallowed.
H302 Harmful if swallowed.
H310 Fatal in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H341 Suspected of causing genetic defects.
H350i May cause cancer by inhalation.
H360D May damage the unborn child.
H360F May damage fertility.
H372 Causes damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

- **Abbreviations and acronyms:**

ADR: 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 Harmonised 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 (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
PBT: Persistent, Bioaccumulative and Toxic

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SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 1: Acute toxicity – Category 1
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 3: Acute toxicity – Category 3
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Muta. 2: Germ cell mutagenicity – Category 2
Carc. 1A: Carcinogenicity – Category 1A
Carc. 1B: Carcinogenicity – Category 1B
Repr. 1B: Reproductive toxicity – Category 1B
Repr. 1B: Reproductive toxicity – Category 1B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

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