

SAFETY DATA SHEET

SILVER PLATING 150 SOLUTION

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Printing date 06.02.2020

Version number 2

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

· Product identifier

Trade Name: **Silver Plate 150 Solution Ready to use solution**

Stock Code: **1034B**

· Article number: 1034B

· 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.

· Details of the supplier of the safety data sheet

· Manufacturer/Supplier:

ALISCO COMPANY LLP

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2 Hazards identification

· Classification of the substance or mixture

· Classification according to Regulation (EC) No 1272/2008



GHS06 skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 1 H310 Fatal in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



GHS05 corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects

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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 GHS05, GHS06, GHS09 ·

Signal word Danger

· **Hazard-determining components of labelling:** potassium cyanide

potassium dicyanoargentate

· **Hazard statements**

- H301 Toxic if swallowed.
H310+H330 Fatal in contact with skin or if inhaled.
H314 Causes severe skin burns and eye damage.
H410 Very toxic to aquatic life with long lasting effects.

· **Precautionary statements**

- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P320 Specific treatment is urgent.
P361+P364 Take off immediately all contaminated clothing and wash it before reuse.
P405 Store locked up.
P501 Dispose of contents/container in accordance with national regulations.

· **Additional information:**

EUH032 Contact with acids liberates very toxic gas.

· **2.3 Other hazards ·**

Results of PBT and vPvB assessment ·

PBT: Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

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

· **Dangerous components:**

CAS: 151-50-8 EINECS: 205-792-3	potassium cyanide  T+ R26/27/28;  N R50/53 R32 -----  Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330;  Aquatic Acute 1, H400; Aquatic Chronic 1, H410	10-25%
CAS: 506-61-6 EINECS: 208-047-0	potassium dicyanoargentate  T R23/24/25;  N R50/53 R32 -----  Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330;  Aquatic Acute 1, H400; Aquatic Chronic 1, H410	2.5-10%

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· **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Remove breathing equipment only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side 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:** Do not induce vomiting; call for medical help 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 further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- 5.1 **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

Special hazards arising from the substance or mixture No further relevant information available.
- 5.2 **Advice for firefighters**
- 5.3 **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- 6.1 **Personal precautions, protective equipment and emergency procedures** Mount respiratory protective device.
- 6.2 **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
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.

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7 Handling and storage

- **Handling:**
- 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:** Do not store together with acids.
- 7.3 · **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

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

· **Ingredients with limit values that require monitoring at the workplace:**

151-50-8 potassium cyanide

WEL (Great Britain)	Long-term value: 5 mg/m ³
ACW Germany	as CN; Sk
MAK (Germany)	Long-term value: 5.0E mg/m ³

IOELV (EU)	Short-term value: 5mg/m ³ Long-term value: 1mg/m ³ Skin: as cyanide
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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.

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- Engineering measures:** Ensure there is exhaust ventilation in the immediate area to extract dust & fumes produced by the product. A powered fume enclosure is recommended.
- Respiratory protection:** Use a full face self-contained breathing respirator which must be available in case of emergency. Particle filter class P1 (EN143).
- Hand protection:** Protective gloves, Use Natural Rubber, Neoprene, Butyl, PVC or Viton gloves. Splash protection: (breakthrough time > 60 minutes). The condition of gloves should be checked prior to each use. The selection of gloves should be made with consideration to working practises and the duration of exposure. To comply with EN388:2016 and 374-1:2016, min thickness 2.1mm, nitrile/PVC/Butyl/rubber.
- Eye protection:** Wear Chemical Splash Safety goggles with side-shields. Ensure eye bath is to hand.
- Skin protection:** Protective clothing. Wear a chemical protective suit, Laboratory coat, full length trousers and closed toe rubber or leather shoes.
- Environmental:** Ensure all engineering measures mentioned in section 7 of SDS are in place. Ensure emissions from ventilation or equipment comply with environmental protection legislation.

• **Protection of hands:**

Protective gloves

• **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 specification
Odour:	Characteristic
Odour threshold:	Not determined.

• pH-value:	Not determined.
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• **Change in condition**

Melting point/freezing point:	Undetermined.
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Initial boiling point and boiling range:	Undetermined.
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• Flash point:	Not applicable.
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• Flammability (solid, gas):	Not applicable.
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• Decomposition temperature:	Not determined.
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· Auto-ignition temperature:	Product is not selfigniting.
· 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:	Fully miscible.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Water:	2.0 %
VOC (EC)	0.00 %
· 9.2 Other information	No further relevant information available.

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Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
Water:	2.0 %
VOC (EC)	0.00 %
9.2 Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- 10.1 **Chemical stability**
- 10.2 **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.

11 Toxicological information

- **Information on toxicological effects**
- 11.1 **Acute toxicity:**

Toxic if swallowed.

Fatal in contact with skin or if inhaled.

Primary irritant effect:

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Skin corrosion/irritation : Causes severe skin burns and eye damage.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

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 Based on available data, the classification criteria are not met. **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish

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

13 Disposal considerations

- **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.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

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14 Transport information

· UN-Number	UN2810
· ADR, IMDG, IATA	
· UN proper shipping name	2810 TOXIC LIQUID, ORGANIC, N.O.S. (POTASSIUM CYANIDE, potassium dicyanoargentate)
· ADR	TOXIC LIQUID, ORGANIC, N.O.S. (POTASSIUM CYANIDE, potassium dicyanoargentate), MARINE POLLUTANT
· IMDG	TOXIC LIQUID, ORGANIC, N.O.S. (POTASSIUM CYANIDE, potassium dicyanoargentate)
· IATA	
· Transport hazard class(es)	
· ADR	
	
· Class	6.1 (TI) Toxic substances.
· Label	6.1
· IMDG, IATA	
	
· Class	6.1 Toxic substances.

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· Label	6.1						
· Packing group							
· ADR, IMDG, IATA	II ₁						
· Environmental hazards:	Product contains environmentally hazardous substances: potassium cyanide, potassium dicyanoargentate						
· Marine pollutant:	Yes						
· Special precautions for user	Warning: Toxic substances.						
· Danger code (Kemler):	66						
· EMS Number:	F-A,S-A						
· Segregation groups	Cyanides						
Stowage Category: B Stowage Code: SW2 Clear of living quarters							
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.						
· Transport/Additional information:							
· ADR							
· Limited quantities (LQ)	0 100 ml						
· Transport category	1 2						
· Tunnel restriction code	C/E D/E						
<table border="0" style="width: 100%;"> <tr> <td style="width: 33%;">Excepted Quantities (EQ):</td> <td style="width: 33%;">Code: E5</td> </tr> <tr> <td>IMDG: Limited Quantities (LQ):</td> <td>0</td> </tr> <tr> <td>Excepted quantities (EQ):</td> <td>Code: E5</td> </tr> </table>		Excepted Quantities (EQ):	Code: E5	IMDG: Limited Quantities (LQ):	0	Excepted quantities (EQ):	Code: E5
Excepted Quantities (EQ):	Code: E5						
IMDG: Limited Quantities (LQ):	0						
Excepted quantities (EQ):	Code: E5						
· UN "Model Regulation":	UN2810, TOXIC LIQUID, ORGANIC, N.O.S. (POTASSIUM CYANIDE, potassium dicyanoargentate), 6.1, <u>H</u>						

[cont...]

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15 Regulatory information

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

Directive 2012/18/EU

Named dangerous substance – ANNEX 1 *None of the ingredients is listed.*

• **Seveso category**

H1 ACUTE TOXIC

E1 Hazardous to the Aquatic Environment

• **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5 t

• **Qualifying quantity (tonnes) for the application of upper-tier requirements** 20 t

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

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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**

H290 May be corrosive to metals.

H300 Fatal if swallowed.

H310 Fatal in contact with skin.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H330 Fatal if inhaled. H400 Very toxic to aquatic life. H410

Very toxic to aquatic life with long lasting effects.

• **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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

ICAO: International Civil Aviation Organisation

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

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

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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 vPvB:

very Persistent and very Bioaccumulative Met.

Corr.1: Corrosive to metals – Category 1

Acute Tox. 2: Acute toxicity - oral – Category 2

Acute Tox. 3: Acute toxicity - oral – Category 3

Acute Tox. 1: Acute toxicity - dermal – Category 1

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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 · * Data compared to the previous version altered.

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