SAFETY DATA SHEET
SILVER STRIKE SALTS

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

1.1. Product identifier

Product name SILVER STRIKE SALTS

Product number TP1302, 149002, 149003, 149004, 998 138, 998 139, TP1294

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

Identified uses Metal Plating

1.3. Details of the supplier of the safety data sheet

Supplier

PMD CHEMICALS LIMITED
401 Broad Lane
Coventry
CV5 7AX
Tel: 024 7692 0168
stevel@pmdchemicals.co.uk

1.4. Emergency telephone number

Emergency telephone 024 7692 0168 (Mon-Fri 8.30-16.30)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (SI 2019 No. 720)

Physical hazards Not Classified

Health hazards Acute Tox. 2 - H300 Acute Tox. 1 - H310 Acute Tox. 1 - H330 STOT SE 1 - H370 STOT RE 1 - H372

Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

2.2. Label elements

Hazard pictograms

Signal word Danger

Hazard statements

H300+H310+H330 Fatal if swallowed, in contact with skin or if inhaled.
H370 Causes damage to organs .
H372 Causes damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

SILVER STRIKE SALTS

Precautionary statements	P260 Do not breathe vapour/ spray. P262 Do not get in eyes, on skin, or on clothing. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. P302+P352 IF ON SKIN: Wash with plenty of water. P308+P311 IF exposed or concerned: Call a POISON CENTER or doctor.
Contains	POTASSIUM CYANIDE, SILVER POTASSIUM CYANIDE
Supplementary precautionary statements	P264 Wash contaminated skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P273 Avoid release to the environment. P284 [In case of inadequate ventilation] wear respiratory protection. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P314 Get medical advice/ attention if you feel unwell. P320 Specific treatment is urgent (see medical advice on this label). P321 Specific treatment (see medical advice on this label). P330 Rinse mouth. P361+P364 Take off immediately all contaminated clothing and wash it before reuse. P391 Collect spillage. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. P501 Dispose of contents/ container in accordance with national regulations.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

POTASSIUM CYANIDE		**60-100%**
CAS number: 151-50-8	EC number: 205-792-3	
M factor (Acute) = 10	M factor (Chronic) = 10	

Classification
Met. Corr. 1 - H290
Acute Tox. 2 - H300
Acute Tox. 1 - H310
Acute Tox. 2 - H330
STOT SE 1 - H370
STOT RE 1 - H372
Aquatic Acute 1 - H400
Aquatic Chronic 1 - H410

SILVER STRIKE SALTS

SILVER POTASSIUM CYANIDE	**5-15%**
CAS number: 506-61-6	EC number: 208-047-0
M factor (Acute) = 10	M factor (Chronic) = 1

Classification
Met. Corr. 1 - H290
Acute Tox. 2 - H300
Acute Tox. 1 - H310
Acute Tox. 2 - H330
Skin Corr. 1A - H314
Eye Dam. 1 - H318
Aquatic Acute 1 - H400
Aquatic Chronic 1 - H410

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information CAUTION! First aid personnel must be aware of own risk during rescue! Remove affected person from source of contamination. Get medical attention.

Inhalation Move affected person to fresh air at once. Get medical attention immediately. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.

Ingestion Get medical attention immediately. Never give anything by mouth to an unconscious person. Do not induce vomiting. Remove affected person from source of contamination. Give plenty of water to drink. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.

Skin contact Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention promptly if symptoms occur after washing.

Eye contact Get medical attention immediately. Remove affected person from source of contamination. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes.

Protection of first aiders It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

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

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

SILVER STRIKE SALTS

Specific treatments Mild poisoning

Artificial respiration with 100% oxygen
Depending on the pathology and clinical findings, astrictly monitored controls of the clinical findings, symptom-oriented treatment for pulmonary edema prophylaxis and a diagnosis (lung X-rays) are necessary.
Antidote treatment
for example
Administration of sodium thiosulfate (12.5 g - 100-500 mg/kg weight) I.V. depending on the clinical presentation and symptoms.
Warning! Dosage level relevant for adults weighing 70 kg.
All cyanide exposed persons should undergo continued monitoring for several hours, even if patient feels well to ensure there are no residual or recurrent poisoning symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Hydrogen cyanide (HCN). Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapours. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions Very toxic to aquatic life.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Do not touch or walk into spilled material. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Provide adequate ventilation. Contain spillage with sand, earth or other suitable non-combustible material. Avoid the spillage or runoff entering drains, sewers or watercourses. Absorb spillage with inert, damp, non-combustible material. Flush contaminated area with plenty of water. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Inform authorities if large amounts are involved.

6.4. Reference to other sections

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid spilling. Avoid contact with skin and eyes. Provide adequate ventilation. Avoid inhalation of vapours. Use approved respirator if air contamination is above an acceptable level.

7.2. Conditions for safe storage, including any incompatibilities

SILVER STRIKE SALTS

Storage precautions Store away from the following materials: Acids. Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store in closed original container at temperatures between 5°C and 30°C.

Storage class Toxic storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

POTASSIUM CYANIDE

Long-term exposure limit (8-hour TWA): WEL 5(CN) mg/m³

SILVER POTASSIUM CYANIDE

Long-term exposure limit (8-hour TWA): WEL 5(CN) mg/m³
WEL = Workplace Exposure Limit.

POTASSIUM CYANIDE (CAS: 151-50-8)

DNEL
Workers - Inhalation; Long term systemic effects: 0.94 mg/m³
Workers - Inhalation; Short term systemic effects: 12.5 mg/m³
Workers - Dermal; Long term systemic effects: 0.14 mg/kg/day
Workers - Dermal; Short term systemic effects: 4.03 mg/kg/day

PNEC
- Fresh water; 1 µg/l
- marine water; 0.2 µg/l
- Intermittent release; 3.2 µg/l
- STP; 50 µg/l
- Sediment; 0.004 mg/kg
- Sediment (Marinewater); 0.0008 mg/kg
- Soil; 0.007 mg/kg

SILVER POTASSIUM CYANIDE (CAS: 506-61-6)

DNEL
Workers - Inhalation; Long term systemic effects: 0.078 mg/m³
Workers - Dermal; Long term systemic effects: 0.011 mg/kg/day

PNEC
Fresh water; 0.04 µg/l
marine water; 0.86 µg/l
STP; 0.025 mg/l
Sediment (Freshwater); 438 mg/kg
Sediment (Marinewater); 438 mg/kg
Soil; 1.41 mg/kg

8.2. Exposure controls

Protective equipment

Appropriate engineering controls Provide adequate general and local exhaust ventilation.

Eye/face protection The following protection should be worn: Chemical splash goggles.

SILVER STRIKE SALTS

Hand protection	Use protective gloves.
Other skin and body protection	Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.
Hygiene measures	Use engineering controls to reduce air contamination to permissible exposure level. Do not smoke in work area. Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Wash promptly with soap and water if skin becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.
Respiratory protection	Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Crystalline powder.
Colour	White.
pH	pH (concentrated solution): pH (diluted solution): >11 @ 20°C
Melting point	Not determined.
Initial boiling point and range	Not determined.
Flash point	Not applicable.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Vapour pressure	Not available.
Solubility(ies)	Soluble in water.
Partition coefficient	Not available.
Auto-ignition temperature	Not applicable.
Decomposition Temperature	Not available.
Explosive properties	Not considered to be explosive.
Oxidising properties	Not applicable.

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Generates very toxic gas in contact with acid.

10.2. Chemical stability

Stability	See Section 10.3 (Possibility of hazardous reactions) for further information.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Generates very toxic gas in contact with acid.

10.4. Conditions to avoid

Conditions to avoid	Avoid contact with acids. Generates very toxic gas in contact with acid.

SILVER STRIKE SALTS

10.5. Incompatible materials

Materials to avoid Acids. Oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Toxic gases/vapours/fumes of: Hydrogen cyanide (HCN).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg) 5.36

Acute toxicity - dermal

ATE dermal (mg/kg) 5.0

Acute toxicity - inhalation

ATE inhalation (gases ppm) 100.0

ATE inhalation (vapours mg/l) 0.5

ATE inhalation (dusts/mists mg/l) 0.05

Skin corrosion/irritation

Skin corrosion/irritation Due to high acute toxicity tests are not relevant.

Serious eye damage/irritation

Serious eye damage/irritation Due to high acute toxicity tests are not relevant.

Respiratory sensitisation

Respiratory sensitisation Due to high acute toxicity tests are not relevant.

Skin sensitisation

Skin sensitisation Due to high acute toxicity tests are not relevant.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure May cause damage to organs .

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.

Inhalation Very toxic by inhalation. Unconsciousness, possibly death.

Ingestion Very toxic if swallowed. Unconsciousness, possibly death.

Skin contact Toxic through skin absorption (percutaneous).

Eye contact Severe irritation, burning and tearing.

SILVER STRIKE SALTS

Acute and chronic health hazards	Gas or vapour is toxic or extremely irritating, even on brief exposure. Gas or vapour displaces oxygen available for breathing (asphyxiant). This chemical can be hazardous when inhaled and/or touched. Toxic through skin absorption (percutaneous). Repeated exposure may cause chronic eye irritation. Exposure may cause: Unconsciousness. Death.
Route of exposure	Inhalation Skin absorption Ingestion. Skin and/or eye contact
Medical symptoms	Cyanosis (blue tissue condition - nails, lips and/or skin).

Toxicological information on ingredients.

POTASSIUM CYANIDE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	6.8
Species	Rat
ATE oral (mg/kg)	6.8

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	6.6
Species	Rat
ATE dermal (mg/kg)	5.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} dust/mist mg/l)	103.0
Species	Rat
ATE inhalation (gases ppm)	100.0
ATE inhalation (vapours mg/l)	0.5
ATE inhalation (dusts/mists mg/l)	0.05

Inhalation	Very toxic by inhalation. Unconsciousness, possibly death.
Ingestion	Very toxic if swallowed. Unconsciousness, possibly death.
Skin contact	Toxic through skin absorption (percutaneous).
Eye contact	Severe irritation, burning and tearing.
Acute and chronic health hazards	Gas or vapour is toxic or extremely irritating, even on brief exposure. Gas or vapour displaces oxygen available for breathing (asphyxiant). This chemical can be hazardous when inhaled and/or touched. Toxic through skin absorption (percutaneous). Repeated exposure may cause chronic eye irritation. Exposure may cause: Unconsciousness. Death.
Route of exposure	Inhalation Skin absorption Ingestion. Skin and/or eye contact
Medical symptoms	Cyanosis (blue tissue condition - nails, lips and/or skin).

SILVER STRIKE SALTS

SILVER POTASSIUM CYANIDE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	20.9
Species	Rat
ATE oral (mg/kg)	20.9

Skin corrosion/irritation

Skin corrosion/irritation	Causes burns.

Serious eye damage/irritation

Serious eye damage/irritation	Causes serious eye damage.

Respiratory sensitisation

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

Skin sensitisation

Skin sensitisation	Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity	Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure	Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	Based on available data the classification criteria are not met.

Inhalation	Very toxic by inhalation. Unconsciousness, possibly death.
Ingestion	Very toxic if swallowed. Unconsciousness, possibly death.
Skin contact	Toxic through skin absorption (percutaneous).
Eye contact	Severe irritation, burning and tearing.
Acute and chronic health hazards	Gas or vapour is toxic or extremely irritating, even on brief exposure. Gas or vapour displaces oxygen available for breathing (asphyxiant). This chemical can be hazardous when inhaled and/or touched. Toxic through skin absorption (percutaneous). Repeated exposure may cause chronic eye irritation. Exposure may cause: Unconsciousness. Death.
Route of exposure	Inhalation Skin absorption Ingestion. Skin and/or eye contact
Medical symptoms	Cyanosis (blue tissue condition - nails, lips and/or skin).

SECTION 12: Ecological information

Ecotoxicity Dangerous for the environment if discharged into watercourses.

Ecological information on ingredients.

POTASSIUM CYANIDE

SILVER STRIKE SALTS

Ecotoxicity	Dangerous for the environment if discharged into watercourses.

SILVER POTASSIUM CYANIDE

Ecotoxicity	Dangerous for the environment if discharged into watercourses.

12.1. Toxicity

Ecological information on ingredients.

POTASSIUM CYANIDE

Toxicity	Very toxic to aquatic organisms.
Acute aquatic toxicity	
LE(C)$_{50}$	0.01 < L(E)C50 ≤ 0.1
M factor (Acute)	10
Acute toxicity - fish	LC_{50}, 96 hours: 0.042 mg/l, Fish
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 0.041 mg/l, Daphnia magna
Chronic aquatic toxicity	
NOEC	0.0001 < NOEC ≤ 0.001
Degradability	Rapidly degradable
M factor (Chronic)	10

SILVER POTASSIUM CYANIDE

Toxicity	Very toxic to aquatic organisms.
Acute aquatic toxicity	
LE(C)$_{50}$	0.01 < L(E)C50 ≤ 0.1
M factor (Acute)	10
Chronic aquatic toxicity	
NOEC	0.01 < NOEC ≤ 0.1
Degradability	Non-rapidly degradable
M factor (Chronic)	1

12.2. Persistence and degradability

Ecological information on ingredients.

POTASSIUM CYANIDE

Persistence and degradability	The product is biodegradable.

12.3. Bioaccumulative potential

Partition coefficient Not available.

Ecological information on ingredients.

POTASSIUM CYANIDE

SILVER STRIKE SALTS

Partition coefficient Not available.

SILVER POTASSIUM CYANIDE

Partition coefficient Not available.

12.4. Mobility in soil

Ecological information on ingredients.

POTASSIUM CYANIDE

Mobility The product is soluble in water.

SILVER POTASSIUM CYANIDE

Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods React with sodium hypochlorite to destroy. Check that all cyanide has been destroyed with starch iodide paper. Absorb in vermiculite, dry sand or earth and place into containers. Dispose of waste via a licensed waste disposal contractor. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 1680

UN No. (IMDG) 1680

UN No. (ICAO) 1680

UN No. (ADN) 1680

14.2. UN proper shipping name

Proper shipping name (ADR/RID) POTASSIUM CYANIDE, SOLID

Proper shipping name (IMDG) POTASSIUM CYANIDE, SOLID

Proper shipping name (ICAO) POTASSIUM CYANIDE, SOLID

Proper shipping name (ADN) POTASSIUM CYANIDE, SOLID

14.3. Transport hazard class(es)

ADR/RID class 6.1

ADR/RID classification code T5

ADR/RID label 6.1

IMDG class 6.1

ICAO class/division 6.1

ADN class 6.1

SILVER STRIKE SALTS

Transport labels

14.4. Packing group

ADR/RID packing group	I
IMDG packing group	I
ICAO packing group	I
ADN packing group	I

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

14.6. Special precautions for user

EmS	F-A, S-A
ADR transport category	1
Emergency Action Code	2X
Hazard Identification Number (ADR/RID)	66
Tunnel restriction code	(C/E)

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

SECTION 15: Regulatory information

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

National regulations	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.
Guidance	Workplace Exposure Limits EH40. Approved Classification and Labelling Guide (Sixth edition) L131. Safety Data Sheets for Substances and Preparations.

15.2. Chemical safety assessment

SECTION 16: Other information

Key literature references and sources for data	Dangerous Properties of Industrial Chemicals, N.Sax, Croner's: Dangerous Substances. Croner's: Emergency Spillage Guide. Croner's: Substances Hazardous to Health. Material Safety Data Sheet, Misc. manufacturers.

SILVER STRIKE SALTS

Revision date	21/02/2024
Revision	4
Supersedes date	23/06/2015
Hazard statements in full	H290 May be corrosive to metals. H300 Fatal if swallowed. H310 Fatal in contact with skin. H330 Fatal if inhaled. H370 Causes damage to organs . H370 Causes damage to organs if inhaled. 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.