

Safety Data Sheet

according to WHS Regulations

Print date: 19.06.2023

Revision date: 19.06.2023

1 Identification

Product Name: Gold(III) chloride solution

Other Means of Identification: Mixture

Recommended Use of the Chemical and Restriction on Use: Industrial use only.

Details of Manufacturer or Importer:

Siltech PMR Pty Ltd
Unit 7, 220 Barry Rd
Campbellfield, VIC 3061

Phone Number: 03 9357 9540

Emergency telephone number: National Poisons Information Centre: 13 11 26

2 Hazard(s) Identification

Hazardous Nature:

Classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.

Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition).



Corrosion

Skin Corrosion/Irritation 1B H314 Causes severe skin burns and eye damage.

Eye Damage 1 H318 Causes serious eye damage.



Environment

Aquatic Chronic 2

H411 Toxic to aquatic life with long lasting effects.



Acute Toxicity (Oral) 4

H302 Harmful if swallowed.

Skin Sensitisation 1

H317 May cause an allergic skin reaction.

Signal Word Danger

Hazard Statements

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements

P260 Do not breathe dusts or mists.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves / eye protection / face protection.

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

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

(Contd. on page 2)

Safety Data Sheet

according to WHS Regulations

Print date: 19.06.2023

Revision date: 19.06.2023

Product Name: Gold(III) chloride solution

(Contd. of page 1)

- P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTER/doctor.
- P321 Specific treatment (see on this label).
- P362+P364 Take off contaminated clothing and wash it before reuse.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P363 Wash contaminated clothing before reuse.
- P391 Collect spillage.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition and Information on Ingredients

Chemical Characterization: Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Hazardous Components:

CAS: 16903-35-8	tetrachloroauric acid ⚠ Corrosive To Metals 1, H290; Skin Corrosion/Irritation 1B, H314; Eye Damage 1, H318; ⚠ Aquatic Chronic 2, H411; ⚠ Acute Toxicity (Oral) 4, H302	≤30%
CAS: 16961-25-4	Tetrachloroauric acid trihydrate ⚠ Skin Corrosion/Irritation 1B, H314; ⚠ Skin Sensitisation 1, H317	≤10%
CAS: 7647-01-0	Hydrochloric acid ⚠ Skin Corrosion/Irritation 1B, H314; ⚠ STOT SE 3, H335	≤5%

4 First Aid Measures

Inhalation: If inhaled, remove to fresh air. Seek medical attention if breathing problems develop.

Skin Contact:

In case of skin contact, immediately remove contaminated clothing and wash affected areas with water and soap. Seek immediate medical attention.

Eye Contact:

In case of eye contact, rinse with water for several minutes, including under eyelids. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes. Seek immediate medical attention.

Ingestion:

If swallowed, do not induce vomiting. Immediately rinse mouth with water. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Symptoms Caused by Exposure:

Inhalation: May cause respiratory irritation.

Skin Contact: Causes severe skin burns. May cause an allergic skin reaction.

Eye Contact: Causes serious eye damage.

Ingestion: Causes burns to the mouth, nose, throat and oesophagus. Harmful if swallowed. May cause gastrointestinal irritation, nausea, diarrhoea and vomiting.

5 Fire Fighting Measures

Suitable Extinguishing Media: Use fire extinguishing methods suitable to surrounding conditions.

Specific Hazards Arising from the Chemical:

Hazardous combustion products include unidentified potentially toxic gases.

Product is not flammable.

Containers close to fire should be removed only if safe to do so. Use water spray to cool fire exposed containers.

(Contd. on page 3)

Safety Data Sheet

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Print date: 19.06.2023

Revision date: 19.06.2023

Product Name: Gold(III) chloride solution

(Contd. of page 2)

Prevent run-off from fire fighting entering drains or water courses.

HAZCHEM Code: 2X

Special Protective Equipment and Precautions for Fire Fighters:

When fighting a major fire wear self-contained breathing apparatus and protective equipment.

6 Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures:

Wear approved respiratory protection, chemical resistant gloves, protective clothing and safety boots.

Evacuate all non-essential personnel from affected area. Do not breathe vapours and mists. Ensure adequate ventilation.

Environmental Precautions:

In the event of a major spill, prevent spillage from entering drains or water courses.

Inform respective authorities in case of seepage into water course or sewage system.

Methods and Materials for Containment and Cleaning Up:

Stop leak if safe to do so and absorb spill with sand, earth, vermiculite or some other absorbent material.

Collect the spilled material and place into a suitable container for disposal.

7 Handling and Storage

Precautions for Safe Handling:

Use of safe work practices are recommended to avoid eye or skin contact and inhalation of vapours and mists.

Use only outdoors or in a well-ventilated area.

Food, beverages and tobacco products should not be stored or consumed where this material is in use. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.

Conditions for Safe Storage:

Store in a cool, dry and well ventilated area. Keep container tightly closed when not in use. Keep away from strong oxidising agents and metals.

8 Exposure Controls and Personal Protection

Exposure Standards:**CAS: 7647-01-0 Hydrochloric acid**WES | Peak limitation: 7.5 mg/m³, 5 ppm**Engineering Controls:**

Ensure adequate ventilation of the working area if the battery inner contents are exposed, keeping airborne concentrations below occupational exposure standards.

Respiratory Protection:

Use an approved vapour respirator (Filter type E) under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapour, inadequate ventilation, development of respiratory tract irritation) and engineering controls are not feasible. See Australian Standards AS/NZS 1715 and 1716 for more information.

Skin Protection:

Chemical resistant gloves. See Australian/New Zealand Standard AS/NZS 2161 for more information.

When selecting gloves for use against certain chemicals, the degradation resistance, permeation rate and permeation breakthrough time should be considered.

Occupational protective clothing (depending on conditions in which it has to be used, in particular as regards the period for which it is worn, which shall be determined on the basis of the seriousness of the risk, the frequency of exposure to the risk, the characteristics of the workstation of each worker and the performance of the protective clothing). See Australian/New Zealand Standard AS/NZS 4501 for more information.

(Contd. on page 4)

Safety Data Sheet

according to WHS Regulations

Print date: 19.06.2023

Revision date: 19.06.2023

Product Name: Gold(III) chloride solution

(Contd. of page 3)

Eye and Face Protection:

Safety glasses with top and side shields or goggles. See Australian/New Zealand Standards AS/NZS 1336 and 1337 for more information.

9 Physical and Chemical Properties

Appearance:

Form:	Liquid
Colour:	Gold
Odour:	No information available
Odour Threshold:	No information available
pH-Value:	1.0-1.5
Melting point/freezing point:	No information available
Initial Boiling Point/Boiling Range:	No information available
Flash Point:	No information available
Flammability (solid, gas):	Not applicable
Auto-ignition Temperature:	No information available
Decomposition Temperature:	No information available
Explosion Limits:	
Lower:	No information available
Upper:	No information available
Vapour Pressure:	No information available
Density:	approx. 1.5 g/cm ³
Vapour Density:	No information available
Evaporation Rate:	No information available
Solubility in Water:	Miscible
Partition Coefficient (n-octanol/water):	No information available
Viscosity:	No information available

10 Stability and Reactivity

Possibility of Hazardous Reactions: No dangerous reactions known under conditions of normal use.

Chemical Stability: Stable at ambient temperature and under normal conditions of storage and use.

Conditions to Avoid: No further relevant information available.

Incompatible Materials: Strong oxidising agents and metals.

Hazardous Decomposition Products: Unidentified potentially toxic gases.

11 Toxicological Information

Toxicity:**LD50/LC50 Values:****CAS: 7647-01-0 Hydrochloric acid**

Oral	LD50	900 mg/kg (Oryctolagus cuniculus (rabbit))
Inhalation	LC50/4 h	4.74 mg/l (Rattus norvegicus (rat))

Acute Health Effects

Inhalation: May cause respiratory irritation.

Skin: Causes severe skin burns. May cause an allergic skin reaction.

Eye: Causes serious eye damage.

Ingestion:

Causes burns to the mouth, nose, throat and oesophagus. Harmful if inhaled. May cause gastrointestinal irritation, nausea, diarrhoea and vomiting.

Skin Corrosion / Irritation: Causes severe skin burns.

(Contd. on page 5)

Safety Data Sheet

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Product Name: Gold(III) chloride solution

(Contd. of page 4)

Serious Eye Damage / Irritation: Causes serious eye damage.**Respiratory or Skin Sensitisation:** May cause an allergic skin reaction.**Germ Cell Mutagenicity:** Based on classification principles, the classification criteria are not met.**Carcinogenicity:**

Based on classification principles, the classification criteria are not met.

Hydrochloric acid is classified by IARC as Group 3 - Not classifiable as to its carcinogenicity to humans.

Reproductive Toxicity: Based on classification principles, the classification criteria are not met.**Specific Target Organ Toxicity (STOT) - Single Exposure:**

Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity (STOT) - Repeated Exposure:

Based on classification principles, the classification criteria are not met.

Aspiration Hazard: Based on classification principles, the classification criteria are not met.**Chronic Health Effects:** No data associated with long term health effects.**Existing Conditions Aggravated by Exposure:** No data available.

12 Ecological Information

Ecotoxicity:**Aquatic toxicity:**

Toxic to aquatic life with long lasting effects.

CAS: 7647-01-0 Hydrochloric acid

EC50/48 h 0.00005 mg/l (Crustacea)

LC50/96 h 282 mg/l (fish)

Persistence and Degradability: No data available on finished product.**Bioaccumulative Potential:** No data available on finished product.**Mobility in Soil:** No data available on finished product.**Other adverse effects:** No further relevant information available.

13 Disposal Considerations

Disposal Methods and Containers: Dispose according to applicable local and state government regulations.**Special Precautions for Landfill or Incineration:**

Please consult your state Land Waste Management Authority for more information.

14 Transport Information

UN Number**ADG, IMDG, IATA**

UN3264

Proper Shipping Name**ADG, IMDG, IATA**CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
(tetrachloroauric acid, HYDROCHLORIC ACID),
ENVIRONMENTALLY HAZARDOUS**Dangerous Goods Class****ADG Class:**

8

Packing Group:**ADG, IMDG, IATA**

II

(Contd. on page 6)

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(Contd. of page 5)

Marine pollutant:	Yes
EMS Number:	F-A,S-B
Hazchem Code:	2X
Special Provisions:	274
Excepted quantities (EQ):	E2
Limited Quantities:	1 L
Packagings & IBCs - Packing Instruction:	P001, IBC02
Portable Tanks & Bulk Containers - Instructions:	T11
Portable Tanks & Bulk Containers - Special Provisions:	TP2, TP27

15 Regulatory Information

Australian Inventory of Industrial Chemicals:

All components are on the inventory, or in compliance with the inventory.

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Poison Schedule:

Poisons Schedule: 5

16 Other Information

Date of Preparation or Last Revision: 19.06.2023

Prepared by: MSDS.COM.AU Pty Ltd

www.msds.com.au

Abbreviations and acronyms:

ADG: Australian Dangerous Goods

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

IARC: International Agency for Research on Cancer

STEL: Short Term Exposure Limit

TWA: Time Weighted Average

NES: National Exposure Standard (Safe Work Australia - Workplace Exposure Standards For Airborne Contaminants)

Corrosive To Metals 1: Corrosive to metals – Category 1

Acute Toxicity (Oral) 4: Acute toxicity – Category 4

Skin Corrosion/Irritation 1B: Skin corrosion/irritation – Category 1B

Eye Damage 1: Serious eye damage/eye irritation – Category 1

Skin Sensitisation 1: Skin sensitisation, Hazard Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Chronic 2: Hazardous to the aquatic environment, long-term (Chronic). Category 2

Disclaimer

This SDS is prepared in accord with the Safe Work Australia document “Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals - July 2020”.

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