

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

1.1. Product identifier

Product form : Substance
Substance name : Gold Chloride, Trihydrate
CAS No : 16961-25-4
Product code : LC14893
Formula : $\text{HAuCl}_4 \cdot 3\text{H}_2\text{O}$

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

Use of the substance/mixture : For laboratory and manufacturing use only.

1.3. Details of the supplier of the safety data sheet

LabChem Inc
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin Corr. 1C H314
Eye Dam. 1 H318

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS05

Signal word (GHS-US) : Danger
Hazard statements (GHS-US) : H314 - Causes severe skin burns and eye damage
Precautionary statements (GHS-US) : P260 - Do not breathe dust
P264 - Wash exposed skin thoroughly after handling
P280 - Wear protective gloves, eye protection
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
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 or doctor/physician
P363 - Wash contaminated clothing before reuse
P405 - Store locked up
P501 - Dispose of contents/container to comply with local, state and federal regulations

2.3. Other hazards

Other hazards not contributing to the classification : None under normal conditions.

2.4. Unknown acute toxicity (GHS-US)

Not applicable

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SECTION 3: Composition/information on ingredients

3.1. Substance

Substance type : Mono-constituent

Name	Product identifier	%	GHS-US classification
Gold Chloride, Trihydrate (Main constituent)	(CAS No) 16961-25-4	100	Skin Corr. 1C, H314 Eye Dam. 1, H318

Full text of H-phrases: see section 16

3.2. Mixture

Not applicable

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest. Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

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

- Symptoms/injuries : Causes severe skin burns and eye damage.
- Symptoms/injuries after eye contact : Causes serious eye damage.

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

Obtain medical assistance.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Reactivity : Thermal decomposition generates : Corrosive vapours.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Protective equipment : Safety glasses. Gloves.
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe dust.
- Hygiene measures : Wash exposed skin thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Comply with applicable regulations.
- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Direct sunlight. Keep container closed when not in use.
- Incompatible products : Strong bases. Sulfites. cyanides. Carbonates.
- Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Gold Chloride, Trihydrate (16961-25-4)	
ACGIH	Not applicable
OSHA	Not applicable

8.2. Exposure controls

- Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation.
- Personal protective equipment : Avoid all unnecessary exposure.
- Hand protection : Wear protective gloves.
- Eye protection : Chemical goggles or face shield.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : Wear appropriate mask.
- Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Solid
- Molecular mass : 393.83 g/mol
- Colour : Yellow
- Odour : None.
- Odour threshold : No data available
- pH : No data available
- Relative evaporation rate (butylacetate=1) : No data available
- Melting point : 254 °C
- Freezing point : No data available
- Boiling point : No data available
- Flash point : No data available
- Auto-ignition temperature : No data available
- Decomposition temperature : No data available
- Flammability (solid, gas) : No data available
- Vapour pressure : No data available
- Relative vapour density at 20 °C : No data available
- Relative density : 3.9
- Solubility : Water:
- Log Pow : No data available
- Log Kow : No data available

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Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : Corrosive vapours.

10.2. Chemical stability

Unstable on exposure to light. Hygroscopic.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Moisture.

10.5. Incompatible materials

Sulfites. Strong bases. cyanides. Carbonates.

10.6. Hazardous decomposition products

Hydrogen chloride. Thermal decomposition generates : Corrosive vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Causes severe skin burns and eye damage.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/injuries after eye contact	: Causes serious eye damage.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

Gold Chloride, Trihydrate (16961-25-4)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Gold Chloride, Trihydrate (16961-25-4)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

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12.5. Other adverse effects

Effect on ozone layer

:

Other information

: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations

: Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials

: Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT

Transport document description

: UN3260 Corrosive solid, acidic, inorganic, n.o.s. (Gold chloride), 8, III

UN-No.(DOT)

: UN3260

DOT Proper Shipping Name

: Corrosive solid, acidic, inorganic, n.o.s.

Department of Transportation (DOT) Hazard Classes

: 8 - Class 8 - Corrosive material 49 CFR 173.136

Hazard labels (DOT)

: 8 - Corrosive



DOT Symbols

: G - Identifies PSN requiring a technical name

Packing group (DOT)

: III - Minor Danger

DOT Special Provisions (49 CFR 172.102)

: IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2).
IP3 - Flexible IBCs must be sift-proof and water-resistant or must be fitted with a sift-proof and water-resistant liner.
T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2)
TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.

DOT Packaging Exceptions (49 CFR 173.xxx)

: 154

DOT Packaging Non Bulk (49 CFR 173.xxx)

: 213

DOT Packaging Bulk (49 CFR 173.xxx)

: 240

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)

: 25 kg

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)

: 100 kg

DOT Vessel Stowage Location

: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

Additional information

Other information

: No supplementary information available.

ADR

No additional information available

Transport by sea

No additional information available

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Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Gold Chloride, Trihydrate (16961-25-4)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 311/312 Hazard Classes Immediate (acute) health hazard

15.2. International regulations

CANADA

Gold Chloride, Trihydrate (16961-25-4)

Not listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification Class E - Corrosive Material

EU-Regulations

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

15.2.2. National regulations

Gold Chloride, Trihydrate (16961-25-4)

Not listed on the Canadian IDL (Ingredient Disclosure List)

15.3. US State regulations

No additional information available

SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Corr. 1C	Skin corrosion/irritation, Category 1C
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage

NFPA health hazard

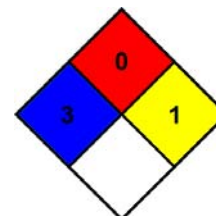
: 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.

NFPA fire hazard

: 0 - Materials that will not burn.

NFPA reactivity

: 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.



HMIS III Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 0 Minimal Hazard

Physical : 1 Slight Hazard

Personal Protection : E

SDS US (GHS HazCom 2012)

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