MATERIAL SAFETY DATA SHEET
Hydrogen tetrachloroaurate(III) trihydrate

Section 1 - Chemical Product and Company Identification

MSDS Name: Hydrogen tetrachloroaurate(III) trihydrate
Catalog Numbers: 41107-0000, 41107-0010
Synonyms: Chloroauric acid trihydrate; Gold trichloride acid trihydrate
Company Identification: Acros Organics BVBA
Janssen Pharmaceuticaalana 3a
2440 Geel, Belgium

Company Identification: (USA)
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410
For information in the US, call: 800-ACROS-01
For information in Europe, call: +32 14 57 52 11
Emergency Number, Europe: +32 14 57 52 99
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300
CHEMTREC Phone Number, Europe: 703-527-3887

Section 2 - Composition, Information on Ingredients

<table>
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<tr>
<th>CAS#</th>
<th>Chemical Name:</th>
<th>%</th>
<th>EINECS#</th>
<th>Hazard Symbols:</th>
<th>Risk Phrases:</th>
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Text for R-phrases: see Section 16

Hazard Symbols: C

Risk Phrases: 22 34

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Harmful if swallowed. Causes burns.

Potential Health Effects
Eye: Causes eye burns.
Skin: Causes skin burns.
Ingestion: Harmful if swallowed. Causes gastrointestinal tract burns.
Inhalation: Causes chemical burns to the respiratory tract.
Chronic:
Section 4 - First Aid Measures

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

**Skin:** Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

**Ingestion:** If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

**Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**Notes to Physician:** Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

**Extinguishing Media:** Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

**Handling:** Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Use only in a chemical fume hood.

**Storage:** Store in a tightly closed container. Store in a dry area. Corrosives area. Keep refrigerated. (Store below 4°C/39°F.)

Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

**Exposure Limits**

CAS# 16903-35-8:

CAS# 16961-25-4:

**Personal Protective Equipment**

**Eyes:** Wear chemical splash goggles.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties
Physical State: Solid
Color: orange
Odor: odorless
pH: Not available
Vapor Pressure: Not available
Viscosity: Not available
Boiling Point: Not available
Freezing/Melting Point: Not available
Autoignition Temperature: Not available
Flash Point: Not available
Explosion Limits: Lower: Not available
Explosion Limits: Upper: Not available
Decomposition Temperature: Not available
Solubility in water: 150 g/l (20°C)
Specific Gravity/Density:
Molecular Formula: HAuCl4.3H2O
Molecular Weight: 393.83

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. Light sensitive. Hygroscopic: absorbs moisture or water from the air.
Conditions to Avoid: Incompatible materials, light, excess heat, exposure to moist air or water.
Incompatibilities with Other Materials: Metals, reducing agents.
Hazardous Decomposition Products: Hydrogen chloride, chlorine, metallic gold.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 16903-35-8: CK6330000
CAS# 16961-25-4: MD5428000
LD50/LC50: RTECS: Not available. RTECS: Not available. Other: Oral, rat: LD50 >464 mg/kg (x hydrate)
Carcinogenicity: Hydrogen tetrachloroaurate(III) - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Hydrogen tetrachloroaurate(III) trihydrate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other: See actual entry in RTECS for complete information. The toxicological properties have not been fully investigated.

Section 12 - Ecological Information

Other: Do not empty into drains.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

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**Section 15 - Regulatory Information**

**European/International Regulations**

European Labeling in Accordance with EC Directives

Hazard Symbols: C

Risk Phrases:
- R 22 Harmful if swallowed.
- R 34 Causes burns.

Safety Phrases:
- S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
- S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 16903-35-8: Not available
CAS# 16961-25-4: Not available

Canada

CAS# 16903-35-8 is listed on Canada’s DSL List

**US Federal**

TSCA

CAS# 16903-35-8 is listed on the TSCA Inventory.
CAS# 16961-25-4 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the Inventory (40CFR720.3(u)(2)).

**Section 16 - Other Information**

**Text for R-phrases from Section 2**

**MSDS Creation Date:** 7/16/1996

**Revision #2 Date:** 2/25/2008

**Revisions were made in Sections:** 1, 2, 3, 5, 6, 7, 9, 10, 11, 1

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