

MATERIAL SAFETY DATA SHEET



Hydrogen Tetrachloro Aurate (III) hydrate

Ru Rh Pd Ag Re Os Ir Pt Au

<p>NFPA</p>	<p>HMIS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #00b0f0; color: white;">HEALTH</td> <td style="text-align: center;">3</td> </tr> <tr> <td style="background-color: #ff0000; color: white;">FLAMMABILITY</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="background-color: #ffff00;">REACTIVITY</td> <td style="text-align: center;">0</td> </tr> <tr> <td>PERSONAL PROTECTION</td> <td style="text-align: center;">J</td> </tr> </table>	HEALTH	3	FLAMMABILITY	0	REACTIVITY	0	PERSONAL PROTECTION	J
HEALTH	3								
FLAMMABILITY	0								
REACTIVITY	0								
PERSONAL PROTECTION	J								

1. Product And Company Identification

<p>Supplier Colonial Metals, Inc. Building 20 505 Blue Ball Road Elkton, MD 21921 United States</p> <p>Company Contact: Wayne Sher Telephone Number: 410-398-7200 FAX Number: 410-398-2918 E-Mail: wsher@colonialmetals.com Web Site: colonialmetals.com</p>	<p>Manufacturer Colonial Metals, Inc. Building 20 505 Blue Ball Road Elkton, MD 21921 United States</p> <p>Company Contact: Wayne Sher Telephone Number: 410-398-7200 FAX Number: 410-398-2918 E-Mail: wsher@colonialmetals.com Web Site: colonialmetals.com</p>
<p>Supplier Emergency Contacts & Phone Number Chemtrac: 800-424-9300 World Wide - Call COLLECT to U.S: 703-527-3887</p>	<p>Manufacturer Emergency Contacts & Phone Number Chemtrac: 800-424-9300 World Wide - Call COLLECT to U.S: 703-527-3887</p>

Issue Date: 09/20/2010

Product Name: Hydrogen Tetrachloro Aurate (III) hydrate
Chemical Name: Gold (III) Chloride hydrate
CAS Number: 16903-35-8
Chemical Family: Group 1B Metal Salt
Chemical Formula: HAuCl₄.3H₂O
MSDS Number: 2001
Product Code: 2001

Synonyms
Choroauric acid, ACS Grade - (CAS # 16961-25-4)

2. Composition/Information On Ingredients

Ingredient Name	CAS Number	Percent Of Total Weight
Hydrogen Tetrachloro Aurate (III) hydrate	16903-35-8	99
water	7732-18-5	75 - 99

EMERGENCY OVERVIEW

Corrosive.
Causes burns. May cause sensitization by contact with skin.

To the best of our knowledge the chemical, physical, and toxicological properties of this compound

MATERIAL SAFETY DATA SHEET



Hydrogen Tetrachloro Aurate (III) hydrate

Ru
Rh
Pd
Ag
Re
Os
Ir
Pt
Au

EMERGENCY OVERVIEW - Continued

have not been thoroughly investigated.

Hazards Identification (Pictograms)



3. Hazards Identification

Primary Routes(s) Of Entry

Eye: Likely
 Inhalation: Likely
 Skin: Likely
 Ingestion: Likely

Eye Hazards

Causes burns.

Skin Hazards

Causes burns. May be harmful if absorbed through the skin.

Ingestion Hazards

May be harmful if swallowed.

Inhalation Hazards

Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. May be harmful if inhaled.

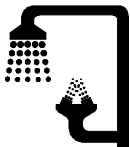
Conditions Aggravated By Exposure

May cause allergic skin reaction.

Conditions Aggravated By Overexposure

To the best of our knowledge, the chemical, physical, and toxicological properties of this compound have not been thoroughly investigated.

First Aid (Pictograms)



4. First Aid Measures

Eye

Flush for 15 minutes with plenty of water. If discomfort occurs or persists, contact a physician immediately.

Skin

Flush area for 15 minutes with copious amounts of water. If discomfort occurs or persists, contact a physician immediately. Remove contaminated clothing and shoes and wash before reuse.



Hydrogen Tetrachloro Aurate (III) hydrate

Ru Rh Pd Ag Re Os Ir Pt Au

4. First Aid Measures - Continued

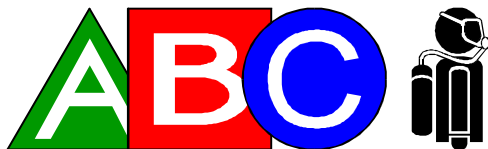
Ingestion

If swallowed, wash out mouth with water provided victim is conscious. Never give anything by mouth to an unconscious person. Contact a physician immediately.

Inhalation

Remove to fresh air immediately. If not breathing provide artificial respiration. If breathing is difficult give oxygen. Contact a physician immediately.

Fire Fighting (Pictograms)



5. Fire Fighting Measures

Flash Point: NA °C

Autoignition Point: NA °C

Flammability Class: NA

Fire And Explosion Hazards

Use proper safety equipment. Emits toxic fumes under fire conditions.

Extinguishing Media

Dry Chemical powder.

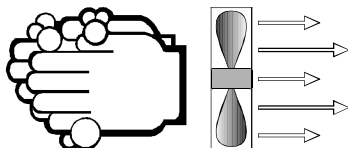
Fire Fighting Instructions

Use NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

6. Accidental Release Measures

Sweep or soak up and place in sealed container; taking care to avoid dusting. Person protected with full face shield and NIOSH approved respirator and cartridge for dust. Ventilate area and wash spill site after pick-up is complete.

Handling & Storage (Pictograms)



7. Handling And Storage

Handling Precautions

Do not breathe dust. Do not get in eyes, on skin, or on clothing. Avoid prolonged or repeated exposure.

Storage Precautions

Keep in a tightly sealed container.

Work/Hygienic Practices

Light sensitive.

Always use good personal hygiene after handling.

MATERIAL SAFETY DATA SHEET

EMI COLONIAL METALS INC. Hydrogen Tetrachloro Aurate (III) hydrate

Ru Rh Pd Ag Re Os Ir Pt Au

7. Handling And Storage - Continued

Other Precautions

0.01 ppm high efficiency particular respirator/supplied air respirator/self-contained breathing apparatus; 0.2 ppm same as above with full face piece; 1 ppm powdered air purifying respirator with high efficiency filter/type C supplied air respirator operated in pressure demand mode. Store in a sealed container, plastic or plastic liner, in a cool, well ventilated, dry area away from volatile acids.

Protective Clothing (Pictograms)



8. Exposure Controls/Personal Protection

Engineering Controls

Ventilation: Local Exhaust: Required in handling area.
 Mechanical: Desirable to insure concentration of material below TLV/TWA levels.
 Other: Closed Ventilation system (Laboratory Fume Hood)

Safety shower and eyewash

Eye/Face Protection

ANSI approved safety glasses/goggles, full face shield.

Skin Protection

Rubber/Neoprene (use compatible chemical-resistant gloves)

Respiratory Protection

NIOSH approved chemical cartridge respirator for particulates and acid gas or self-contained breathing apparatus with full face shield.

Other/General Protection

Lab coat/apron, flame and chemical resistant protective clothing, eye wash, safety shower, and hygienic facilities for washing.

9. Physical And Chemical Properties

Appearance

Orange powder

Chemical Type: Mixture

Physical State: Solid

Molecular Weight: 393.83

pH Factor: acidic

10. Stability And Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur

Conditions To Avoid (Stability)

Light and moisture.



Hydrogen Tetrachloro Aurate (III) hydrate

Ru Rh Pd Ag Re Os Ir Pt Au

<p>10. Stability And Reactivity - Continued</p> <p><u>Incompatible Materials</u> Reducing agents.</p> <p><u>Hazardous Decomposition Products</u> Chlorine gas, hydrogen chloride and metallic gold.</p>
<p>11. Toxicological Information</p> <p>To the best of our knowledge the chemical, physical, and toxicological properties of this compound have not been thoroughly investigated.</p>
<p>12. Ecological Information</p> <p>No Data Available...</p>
<p>13. Disposal Considerations</p> <p>Consult Federal EPA, State, and local regulations for proper disposal/recycle/reclamation.</p> <p>NOTE: Chemical additions, processing, or otherwise altering this material may make the waste management information presented above incomplete, inaccurate, or otherwise inappropriate.</p> <p><u>RCRA Information</u> Waste solutions may meet the RCRA Corrosive characteristic.</p>
<p>14. Transport Information</p> <p><u>Proper Shipping Name</u> Corrosive solid, acidic, inorganic, n.o.s. (Hydrogen Tetrachloro Aurate (III))</p> <p><u>Hazard Class</u> 8</p> <p><u>DOT Identification Number</u> 3260</p> <p><u>DOT Shipping Label</u> Corrosive</p> <p><u>Packaging Requirements</u> II</p> <p><u>Additional Shipping Paper Description</u> IATA: same as DOT, always consult IATA manual before shipping.</p> <p><u>DOT (Pictograms)</u></p>



Hydrogen Tetrachloro Aurate (III) hydrate

Ru Rh Pd Ag Re Os Ir Pt Au

15. Regulatory Information

U.S. Regulatory Information

All ingredients of this product are listed under the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

SARA Section 313 Notification

This product does not contain any ingredients regulated under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 or 40 CFR 372.

Canadian Regulatory Information

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: No

NDSL: No

European Union (EU) Regulatory Information

Symbol of Danger: C

Indication of Danger: Corrosive.

R: 34-43

Risk Statements: Causes burns. May cause sensitization by skin contact.

S: 26-27-36/37/39-45

Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Take off immediately all contaminated clothing. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

DSCL - Europe (Pictograms)



16. Other Information

NFPA Rating

Health: 3

Fire: 0

Reactivity: 0

Other: COR

HMIS Rating

Health: 3

Fire: 0

Reactivity: 0

Personal Protection: J

Revision/Preparer Information

MSDS Preparer: Joseph J. Fittos III

MSDS Preparer Phone Number: 410-398-7200

This MSDS Supersedes A Previous MSDS Dated: 10/12/2007

MATERIAL SAFETY DATA SHEET



Hydrogen Tetrachloro Aurate (III) hydrate

Ru **Rh** **Pd** **Ag** **Re** **Os** **Ir** **Pt** **Au**

Disclaimer

In compliance with the OSHA Hazard Communication Standard, 29 C.F.R. 1910.1200, we are providing you with a Material Safety Data Sheet (MSDS) for the hazardous material you are purchasing.

It is your responsibility to educate your employees on the safe use of the hazardous material. With this mind, a copy should be forwarded to the supervisor of the user or to the user themselves, and a copy should be retained in your files for future reference.

Colonial Metals, Inc. makes no presentation as to the accuracy of the information in the MSDS. The information is believed to be correct; however, you (the customer), should perform your own investigation and independent verification. If you resell the product, you are responsible to forward the information in the MSDS to your customer.

Colonial Metals, Inc.

Printed Using MSDS Generator™ 2000