


MATERIAL SAFETY DATA SHEET

Hexamine ruthenium (III) chloride

NFPA 	HMIS <table border="1"><tr><td>HEALTH</td><td style="text-align: center;">2</td></tr><tr><td>FLAMMABILITY</td><td style="text-align: center;">0</td></tr><tr><td>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	2	FLAMMABILITY	0	REACTIVITY	0	PERSONAL PROTECTION	J
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FLAMMABILITY	0								
REACTIVITY	0								
PERSONAL PROTECTION	J								

1. Product And Company Identification

Supplier Colonial Metals, Inc. Building 20 505 Blue Ball Road Elkton, MD 21921 United States Company Contact: Joseph Fittos III Telephone Number: 410-398-7200 FAX Number: 410-398-2918 E-Mail: jfittos@colonialmetals.com Web Site: colonialmetals.com	Manufacturer Colonial Metals, Inc. Building 20 505 Blue Ball Road Elkton, MD 21921 United States Company Contact: Joseph Fittos III Telephone Number: 410-398-7200 FAX Number: 410-398-2918 E-Mail: jfittos@colonialmetals.com Web Site: colonialmetals.com
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Supplier Emergency Contacts & Phone Number Chemtrac: 800-424-9300 World Wide - Call COLLECT to U.S: 703-527-3887	Manufacturer Emergency Contacts & Phone Number Chemtrac: 800-424-9300 World Wide - Call COLLECT to U.S: 703-527-3887
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Issue Date: 03/16/2009

Product Name: Hexamine ruthenium (III) chloride
CAS Number: 14282-91-8
Chemical Family: Platinum group metal complex
Chemical Formula: (NH₃)₆Cl₃ Ru
MSDS Number: 8015
Product Code: 8015

Synonyms
none

2. Composition/Information On Ingredients

Ingredient Name	CAS Number	Percent Of Total Weight
Hexamine ruthenium (III) chloride	14282-91-8	99

EMERGENCY OVERVIEW

Irritant.

3. Hazards Identification

Primary Routes(s) Of Entry	
Eye:	Likely
Inhalation:	Likely
Skin:	Likely
Ingestion:	Likely

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3. Hazards Identification - Continued

Eye Hazards

Causes irritation.

Skin Hazards

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

Ingestion Hazards

May be harmful if swallowed.

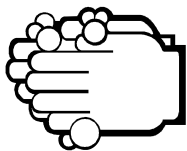
Inhalation Hazards

Irritating to the respiratory tract. May be harmful if inhaled.

Chronic/Carcinogenicity Effects

To the best of our knowledge, the chemical, the 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

Wash with soap and plenty of water. If discomfort occurs or persists, contact a physician immediately. Remove contaminated clothing and shoes and wash before reuse.

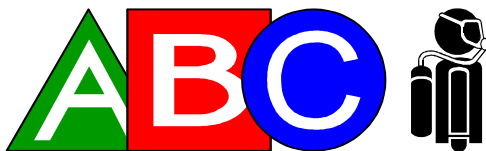
Ingestion

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 victim is not breathing provide artificial respiration. Contact a physician immediately.

Fire Fighting (Pictograms)



5. Fire Fighting Measures

Flash Point: NA °C

Autoignition Point: NA °C

Flammability Class: NA

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5. Fire Fighting Measures - Continued

Fire And Explosion Hazards

Use proper safety equipment.

Extinguishing Media

Use water spray, foam, carbon dioxide (CO₂), alcohol resistant foam or dry chemical.

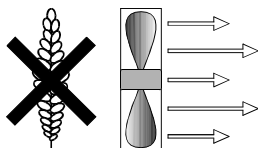
Fire Fighting Instructions

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

6. Accidental Release Measures

Wear proper personal protective equipment. Sweep up and placed in a container for reclaim or waste disposal. Avoid raising dust. Avoid breathing dust. Ventilate area and wash spill site after pick up is complete.

Handling & Storage (Pictograms)



7. Handling And Storage

Handling And Storage Precautions

Handling Precautions

Avoid contact with eyes. Avoid contact with skin and clothing. Avoid formation of dust and aerosols. Ensure adequate ventilation.

Storage Precautions

Keep material in a tightly sealed container in a dry well ventilated place under inert atmosphere at 2-8C.

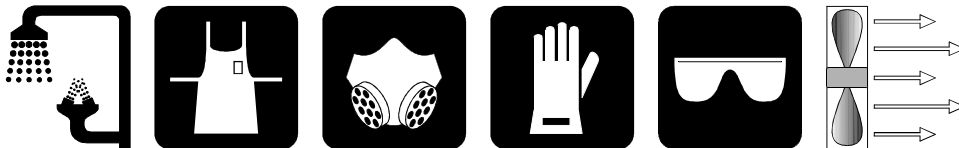
Work/Hygienic Practices

Wash thoroughly with soap and water after handling. Use good personal hygiene.
Air sensitive.

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

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8. Exposure Controls/Personal Protection - Continued

Engineering Controls - Continued

Other: Recommended - Dust (Laboratory Fume Hood)

Safety shower and eyewash

Eye/Face Protection

ANSI approved safety glasses/goggles

Skin Protection

Rubber/Neoprene (use compatible chemical-resistant gloves).

Respiratory Protection

NIOSH approved chemical cartridge respirator for particulates and dust 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 hygiene facilities for washing.

9. Physical And Chemical Properties

Appearance

Light yellow solid

Chemical Type: Mixture

Physical State: Solid

Molecular Weight: 309.61

10. Stability And Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur

Conditions To Avoid (Stability)

Exposure to air.

Incompatible Materials

Strong oxidizing agents.

Hazardous Decomposition Products

Nitrogen oxides (NO_x), hydrogen chloride gas, ruthenium oxide.

11. Toxicological Information

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

12. Ecological Information

No Data Available...

13. Disposal Considerations

Consult Federal EPA, State and local regulations for proper disposal/recycle/reclamation

NOTE: Chemical additions, processing, or otherwise altering this material may make the waste management information presented above incomplete, inaccurate, or otherwise inappropriate.

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14. Transport Information

Proper Shipping Name

None

Hazard Class

Non-hazardous for shipping

Additional Shipping Paper Description

IATA: Non-hazardous for shipping. Consult IATA regulations before shipping.

15. Regulatory Information

Canadian Regulatory Information

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

DSL: No

NDSL: No

16. Other Information

NFPA Rating

Health: 2

Fire: 0

Reactivity: 0

HMIS Rating

Health: 2

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: 03/27/2008

Disclaimer

In compliance with the OSHA Hazard Communication Standard, 29 C.F.R 1910.1200, we are providing you with a Materials 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 in mind, a copy should be forwarded to the supervisor of the user or to the user themselves, and 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.