



# MATERIAL SAFETY DATA SHEET

## Ruthenium Red

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

### 1. Product And Company Identification

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

**Issue Date:** 10/11/2010

**Product Name:** Ruthenium Red  
**Chemical Name:** Ruthenium (III, IV) Chloride Oxide Ammoniated Hydrate, Ruthenium Red  
**CAS Number:** 12790-48-6  
**Chemical Family:** Platinum Group Metal Salts  
**Chemical Formula:** Ru3O2(NH3)14Cl6.2H2O  
**MSDS Number:** 8014  
**Product Code:** 8014

### 2. Composition/Information On Ingredients

Ingredient Name	CAS Number	Percent Of Total Weight
Ruthenium Red	12790-48-6	91.5

### EMERGENCY OVERVIEW

To the best of our knowledge the chemical, physical, and toxicological properties have not been thoroughly investigated. Avoid high temperature. May decompose ammonia and chlorine vapor.

### 3. Hazards Identification

#### Primary Routes(s) Of Entry

Inhalation: Likely  
 Skin: Likely  
 Ingestion: Likely

#### Eye Hazards

Irritation

#### Skin Hazards

Irritation

#### Ingestion Hazards

Irritation, nausea and diarrhea; poison is unlikely on a single exposure.

**3. Hazards Identification - Continued****Ingestion Hazards - Continued**

Does not cause serious toxic manifestations.

**Inhalation Hazards**

Irritation and possibly difficulty in breathing

**Conditions Aggravated By Exposure**

May cause irritation of the respiratory system. Maintain housekeeping and personal hygiene to minimize exposure and prevent sensitization.

**Conditions Aggravated By Overexposure**

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

**4. First Aid Measures****Eye**

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

**Skin**

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

**Ingestion**

Not expected to be a problem in industry. However if swallowed and discomfort occurs, contact a physician.

**Inhalation**

Remove to fresh air immediately. If discomfort occurs or persists, contact a physician.

**5. Fire Fighting Measures**

**Flash Point Method:** NA

**Flammability Class:** NA

**Fire And Explosion Hazards**

Use proper safety equipment. Can decompose to emit toxic ammonia and chlorine vapors.

**Extinguishing Media**

Use water spray, foam, carbon dioxide, or medium to fight primary source.

**Fire Fighting Instructions**

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

**6. Accidental Release Measures**

Sweep up or soak up solution and place in a sealed container, taking care to avoid dusting. Person protected with full face shield and proper respirator for dust. Ventilate area and wash spill site after pick up is complete.

**7. Handling And Storage****Handling And Storage Precautions**

Avoid contact with eyes, prolonged or repeated contact with skin. Avoid breathing dust. Use compatible chemical resistant gloves. Wash hands thoroughly after handling.

**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

**Ruthenium Red****Ru Rh Pd Ag Re Os Ir Pt Au****7. Handling And Storage - Continued**

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.

**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 - Dust (Laboratory Fume Hood)

**Eye/Face Protection**

ANSI approved safety glasses/goggles

**Skin Protection**

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

**Respiratory Protection**

Chemical cartridge respirator for dust/mist/fume/radionuclide 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**

Dark brown powder

**Odor**

Ammonical odor

**Chemical Type:** Mixture

**Physical State:** Solid

**Melting Point:** Decomposes °C

**Boiling Point:** NA °C

**Specific Gravity:** NE

**Molecular Weight:** 822.38

**Vapor Pressure:** NA

**Vapor Density:** NA

**pH Factor:** NA

**Solubility:** Soluble

**Evaporation Rate:** NA

**10. Stability And Reactivity**

**Stability:** Stable

**Hazardous Polymerization:** Will not occur

**Conditions To Avoid (Stability)**

High temperature

**Incompatible Materials**

NE

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### 10. Stability And Reactivity - Continued

#### Hazardous Decomposition Products

Ammonia & chlorine vapor

### 11. Toxicological Information

No Data Available...

### 12. Ecological Information

No Data Available...

### 13. Disposal Considerations

Place in sealed container. 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.

#### RCRA Information

NL

### 14. Transport Information

No Data Available...

### 15. Regulatory Information

No Data Available...

### 16. Other Information

#### Revision/Preparer Information

**MSDS Preparer:** Wayne Sher

**MSDS Preparer Phone Number:** 410-398-7200

**This MSDS Supersedes A Previous MSDS Dated:** 03/15/1998

#### **Disclaimer**

In compliance with the OSHA Hazard Communication Standard, 2.9 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.

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