

# MATERIAL SAFETY DATA SHEET



## Perrhenic Acid Solution

Ru
Rh
Pd
Ag
Re
Os
Ir
Pt
Au

<b>NFPA</b> 	<b>HMS</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #00b0f0; color: white; padding: 2px;">HEALTH</td> <td style="text-align: center; width: 40px;">3</td> </tr> <tr> <td style="background-color: #ff0000; color: white; padding: 2px;">FLAMMABILITY</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="background-color: #ffff00; padding: 2px;">REACTIVITY</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="padding: 2px;">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><b>Supplier</b>                  Colonial Metals, Inc.                  Building 20                  505 Blue Ball Road                  Elkton, MD 21921 United States</p> <p><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</p>	<p><b>Manufacturer</b>                  Colonial Metals, Inc.                  Building 20                  505 Blue Ball Road                  Elkton, MD 21921 United States</p> <p><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</p>
<p><b>Supplier Emergency Contacts &amp; Phone Number</b>                  Chemtrac: 800-424-9300                  World Wide - Call COLLECT to U.S: 703-527-3887</p>	<p><b>Manufacturer Emergency Contacts &amp; Phone Number</b>                  Chemtrac: 800-424-9300                  World Wide - Call COLLECT to U.S: 703-527-3887</p>

**Issue Date:** 12/30/2010

**Product Name:** Perrhenic Acid Solution  
**Chemical Name:** Perrhenic Acid  
**CAS Number:** 13768-11-1  
**Chemical Family:** Group 7B Metal  
**Chemical Formula:** HReO<sub>4</sub>xH<sub>2</sub>O  
**MSDS Number:** 1002  
**Product Code:** 1000-2-S, 2-S-A, 2-S-B

### 2. Composition/Information On Ingredients

Ingredient Name	CAS Number	Percent Of Total Weight
Perrhenic Acid	13768-11-1	51 - 56
Water	7732-18-5	27 - 53

This Product can contain:

1. 18-22% Rhenium Metal
2. 38-42% Rhenium Metal.

**EMERGENCY OVERVIEW**

To the best of our knowledge the chemical, physical, and toxicological properties have not been thoroughly investigated. Avoid high temperatures. Product incompatible with strong reducers, metals, and bases. May decompose oxidation products of Rhenium. This product is corrosive and can cause burns.

**Hazards Identification (Pictograms)**



**3. Hazards Identification**

**Primary Routes(s) Of Entry**

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

**Eye Hazards**

Causes eye burns.

**Skin Hazards**

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

**Ingestion Hazards**

May be harmful if swallowed.

**Inhalation Hazards**

May be harmful if inhaled. Extremely destructive to the upper respiratory tract and mucous membranes.

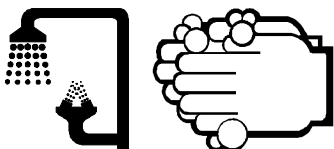
**Conditions Aggravated By Exposure**

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, 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.

**4. First Aid Measures - Continued**

**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.

**Ingestion**

Not expected to be a problem in industry; however if swallowed wash out mouth with water provided victim is conscious, never give anything by mouth to an unconscious person. DO NOT induce vomiting. Contact a physician immediately.

**Inhalation**

Remove to fresh air immediately. If required provide artificial respiration. If breathing is difficult give oxygen. Contact a physician immediately.

**Fire Fighting (Pictograms)**



**5. Fire Fighting Measures**

**Flash Point Method:** NA

**Flammability Class:** NA

**Fire And Explosion Hazards**

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

**Extinguishing Media**

Dry chemical powder.

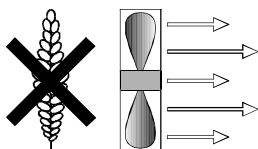
**Fire Fighting Instructions**

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

**6. Accidental Release Measures**

Soak up (neutralize with sodium carbonate or an absorbant such as vermiculite) and place in a sealed acid proof container. Person protected with full face shield and NIOSH approved respirator cartlidge for ammonia vapor and dust. Ventilate area and wash spill site after pick up is complete.

**Handling & Storage (Pictograms)**



**7. Handling And Storage**

**Handling Precautions**

Do not breathe vapor. Do not get into eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

**7. Handling And Storage - Continued**

**Storage Precautions**

Keep tightly closed container.

**Work/Hygienic Practices**

Wash thoroughly with soap and water after handling. Use good personal hygiene. Wash 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 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 dust, if there is potential for airborne exposure to exceed established treshold values, 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 liquid

**Chemical Type:** Mixture

**Physical State:** Liquid

**Melting Point:** NA °C

**Boiling Point:** ~100 °C

**Specific Gravity:** 2.16 g/cm3

Ru Rh Pd Ag Re Os Ir Pt Au

<p><b>9. Physical And Chemical Properties - Continued</b></p> <p><b>Molecular Weight:</b> 251.2  <b>Vapor Pressure:</b> NE  <b>Vapor Density:</b> NE  <b>pH Factor:</b> &lt;1  <b>Solubility:</b> Soluble  <b>Evaporation Rate:</b> NE</p>
<p><b>10. Stability And Reactivity</b></p> <p><b>Stability:</b> Stable  <b>Hazardous Polymerization:</b> Will not occur</p> <p><b>Conditions To Avoid (Stability)</b>  High temperatures.</p> <p><b>Incompatible Materials</b>  Strong bases.</p> <p><b>Hazardous Decomposition Products</b>  CO and CO2.</p> <p><b>Conditions To Avoid (Polymerization)</b>  Will not occur.</p>
<p><b>11. Toxicological Information</b></p> <p><b>Acute Studies</b>  No data available</p> <p><b>Chronic/Carcinogenicity</b>  NONE</p> <p>To the best of our knowledge, the chemical, physical, and toxicological properties of this compound have not been thoroughly investigated.</p>
<p><b>12. Ecological Information</b></p> <p>No Data Available...</p>
<p><b>13. Disposal Considerations</b></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><b>RCRA Information</b>  NL</p>
<p><b>14. Transport Information</b></p> <p><b>Proper Shipping Name</b>  Corrosive liquid, acidic, inorganic, n.o.s.</p> <p><b>Hazard Class</b>  8</p>

**14. Transport Information - Continued****Secondary Hazard Class**

NL

**DOT Identification Number**

3264

**DOT Shipping Label**

Corrosive

**Freight Class**

See 49 CFR

**Packaging Exceptions**

See 49 CFR

**Packaging Requirements**

II

**Additional Shipping Paper Description**

IATA same as DOT, always consult IATA manual before shipping.

**DOT (Pictograms)****ADR - Europe (Pictograms)****TDG - Canada (Pictograms)****15. Regulatory Information****U.S. Regulatory Information**

This chemical is TSCA listed.

**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.

**European Union (EU) Regulatory Information**

Symbol of Danger: C

Indication of Danger: Corrosive

**15. Regulatory Information - Continued****European Union (EU) Regulatory Information - Continued**

R: 34

Risk Phrase: Causes burns.

S: 26 36/37/39 45

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

**Other International Regulations**

US Classification and Label Text

Indication of Danger: Corrosive

Risk Phrase: Causes burns.

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

**WHMIS - Canada (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

**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.

# MATERIAL SAFETY DATA SHEET



## Perrhenic Acid Solution

Ru Rh Pd Ag Re Os Ir Pt Au

### Disclaimer - Continued

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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