


MATERIAL SAFETY DATA SHEET

Ruthenium Dioxide Hydrate

NFPA 	HMIS <table border="1"><tr><td>HEALTH</td><td style="text-align: center;">1</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	1	FLAMMABILITY	0	REACTIVITY	0	PERSONAL PROTECTION	J
HEALTH	1								
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: 02/17/2009

Product Name: Ruthenium Dioxide Hydrate
Chemical Name: Ruthenium Dioxide, Ruthenium (IV) Oxide Hydrate
CAS Number: 32740-79-7
Chemical Family: Platinum Group Metal Salts
Chemical Formula: RuO₂.xH₂O
MSDS Number: 8005
Product Code: 8005

2. Composition/Information On Ingredients

Ingredient Name	CAS Number	Percent Of Total Weight
Ruthenium Dioxide	32740-79-7	78.7

EMERGENCY OVERVIEW

Irritant.

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

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Hazards Identification (Pictograms)



3. Hazards Identification

Primary Routes(s) Of Entry

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

Eye Hazards

Mild to severe irritation.

Skin Hazards

Slight to mild irritation.

Ingestion Hazards

May be harmful if swallowed.

Inhalation Hazards

Irritation of the respiratory tract.

4. First Aid Measures

Eye

Flush thoroughly with plenty of water for 15 minutes. Contact a physician immediately.

Skin

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

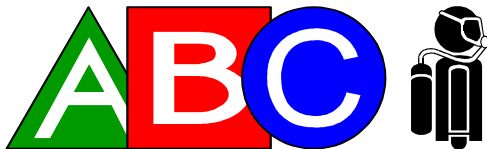
Ingestion

If swallowed wash out mouth with water provided the victim is conscious. Never give anything by mouth to an unconscious person. Induce vomiting only if directed to do so by medical personnel. Contact a physician immediately.

Inhalation

Remove to fresh air immediately. 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. Can ignite by spontaneous combustion in the presense of organics.

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5. Fire Fighting Measures - Continued

Extinguishing Media

Use medium suitable to fight surrounding fire.

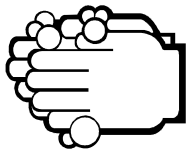
Fire Fighting Instructions

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

Avoid contact with eyes, prolonged or repeated contact with skin. Avoid breathing dust.

Storage Precautions

Store in a tightly sealed container in a cool, dry place.

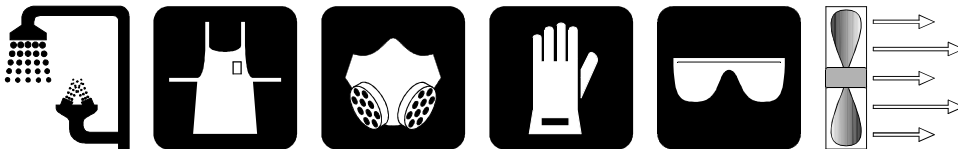
Work/Hygienic Practices

Always use good personal hygiene 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 - 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).

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8. Exposure Controls/Personal Protection - Continued

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

Black powder

Odor

Odorless

Chemical Type: Mixture

Physical State: Solid

Melting Point: Decomposes °C

Boiling Point: NA °C

Specific Gravity: ~7.0

Molecular Weight: 160.07

Vapor Pressure: NA

Vapor Density: NA

pH Factor: NA

Solubility: Insoluble

Evaporation Rate: NA

10. Stability And Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur

Conditions To Avoid (Stability)

Mixing with organics

Incompatible Materials

Organics, especially acetone and alcohol and active metals.

Hazardous Decomposition Products

NA

11. Toxicological Information

To the best of our knowledge the chemical, 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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13. Disposal Considerations - Continued

RCRA Information

NL

14. Transport Information

Proper Shipping Name

Considered non-hazardous for shipping

Additional Shipping Paper Description

IATA: Same as DOT regulations 49 CFR. Consult IATA regulations before shipping.

15. Regulatory Information

No Data Available...

16. Other Information

NFPA Rating

Health: 1

Fire: 0

Reactivity: 0

Other: COR

HMIS Rating

Health: 1

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: 03/12/2001

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.