

## Safety Data Sheet

### 29 CFR 1910.1200

#### Section 1: Company and Product Identification

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**Product Name:** Dichlorotris (triphenylphosphine) Ruthenium (II)

**Product Code:** 8012

**Company:** Colonial Metals, Inc.  
 Building 20  
 505 Blue Ball Road  
 Elkton, MD 21921 United States  
 Company Contact: EHS Director  
 Telephone Number: 410-398-7200  
 FAX Number: 410-398-2918  
 E-Mail : info@colonialmetals.com  
 Web Site: www.colonialmetals.com



www.colonialmetals.com

**Emergency Response:** Supplier Emergency Contacts & Phone Number  
 Chemtrec: 800-424-9300  
 World Wide - Call COLLECT to U.S: 703-527-3887

#### Section 2: Hazards Identification

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**Hazard Pictograms:**



**Signal Word:**

Warning

**Hazard Category:**

Serious eye damage/eye irritation Cat 3  
 Skin corrosion/irritation Cat 2  
 Acute tox, inh. Cat 5  
 Acute tox, dermal Cat 5  
 Acute tox, oral Cat 5  
 Specific target organ tox, single exp. Cat 3 (resp irrit)

**Hazard Statements:**

H320: Causes eye irritation  
 H315: Causes skin irritation  
 H333: May be harmful if inhaled  
 H313: May be harmful in contact with skin  
 H303: May be harmful if swallowed  
 H335: May cause respiratory irritation

**Precautionary Statements:**

P261: Avoid breathing dust/fume/gas/mist/vapors/spray  
 P264: Wash thoroughly after handling  
 P270: Do not eat, drink or smoke when using this product  
 P271: Use only outdoors or in a well-ventilated area  
 P280: Wear protective gloves/protective clothing/eye protection/face protection  
 P301+312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel  
 P302+352: IF ON SKIN: Wash with soap and water  
 P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position  
 P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove  
 P312: Call a POISON CENTER or doctor/physician if you feel unwell  
 P322: Specific measures (see First Aid Supplement on this label)  
 P330: Rinse mouth  
 P332+313: If skin irritation occurs: Get medical advice/attention  
 P337+313: If eye irritation persists get medical advice/attention  
 P362: Take off contaminated clothing and wash before reuse  
 P403+233: Store in a well ventilated place. Keep container tightly closed  
 P405: Store locked up  
 P501: Dispose of contents/container in accordance with

**Hazards not otherwise classified:**

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

**Section 3: Composition / Information on Ingredients**

Hazardous substance (name)	Hazard Category	CAS#	Weight %
Dichlorotris(triphenylphosphine) Ruthenium (II)	Irritant	15529-49-4	100
<b>Chemical Family:</b> Metal-phosphine Complexes			
<b>Chemical Formula:</b> RuCl <sub>2</sub> ((C <sub>6</sub> H <sub>5</sub> )P) <sub>3</sub>			

**Section 4: First Aid Measures**

**General Info:** Consult a Physician. Show this safety data sheet to the doctor in attendance.

**Notable Exposure:** Irritation to skin, eyes and areas of contact.

**symptoms:**

**If ingested:** Seek medical attention immediately. Keep victim calm. Give the victim water (only if conscious).

Induce vomiting only if directed by medical personnel.

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

**Eye contact:** 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.

**Skin contact:** 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.

**Section 5: Fire Fighting Measures**

**General Info:** Use proper safety equipment. Hazardous decomposition products formed under fire conditions.

**Extinguishing:** In case of fire, dry chemical, CO<sub>2</sub>, or "alcohol resistant" foam.

**Method / Equipment:**

**Hazardous:** Firefighters should wear self-contained breathing apparatus and full protective gear. Hazardous

**Decomposition Info:** decomposition products formed under fire conditions.

**Section 6: Accidental Release Measures**

**Personal precautions, protective equipment and procedures:** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate respiratory protective equipment and clothing during clean-up. Avoid breathing dust. Ventilate area if easy to do so. Contact local authorities if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Containment:** Contain actively spilling material if safe and easy to do so. Do not let product enter drains.

**Equipment and**

**Procedures:**

**Cleanup Procedures:** Small spills can be mixed with vermiculite or sodium carbonate and swept up

**Section 7: Handling and Storage**

**Safe Handling:** Do not handle until all safety precautions have been read and understood. Keep containers tightly

**Precautions:** closed. Ensure adequate ventilation. Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment and wash thoroughly after handling. Keep away from ignition sources.

**Recommendations for Storage:** Store in a tightly sealed container. Keep away from heat and direct sunlight.

**Incompatibilities:** Strong oxidizing agents.

**Section 8: Exposure Control / Personal Protection**

**General / Engineering Controls:** If possible, handle the material in an efficient fume hood

**Controls:**

**Work Clothing:** Protective work clothing which covers skin and prevents exposures.

**Eye/face protection:** Wear safety glasses with side shields or goggles or face shield.

**Skin Protection:** Wear chemical resistant gloves.

**Respiratory Protection:** None Required

**Protection:**

**Section 9: Physical and Chemical Properties**

<b>State:</b> Solid	<b>Melting Point:</b> N/A	<b>Freezing Point:</b> N/A
<b>Color:</b> Black	<b>Boiling Point/Range:</b> N/A	<b>pH:</b> N/A
<b>Molecular Wt.:</b> 958.85 g/mol	<b>Odor:</b> N/A	<b>Water Solubility:</b> Insoluble
<b>Evaporation rate:</b> N/A	<b>Flash Point:</b> N/A	<b>Part. Coeff (n-octanol/water):</b> N/A
<b>Upper Flam Limits:</b> N/A	<b>Lower Flam Limits:</b> N/A	<b>Vapor Pressure:</b> N/A
<b>VOC Content (lbs/gal):</b> N/A	<b>Viscosity:</b> N/A	<b>Autoignition Temp:</b> N/A

**Section 10: Stability and Reactivity**

**General:** This product is stable and non-reactive under normal conditions of use. Product is not subject to hazardous polymerization. Avoid open flame and ignition sources.

**Incompatible materials:** Strong oxidizing agents.

**Decomposition products:** Carbon dioxide, carbon monoxide, organic fumes, hydrogen chloride, ruthenium compounds

**Section 11: Toxicological Information**

**General Information:** To the best of our knowledge, the chemical, the physical, and toxicological properties of this compound have not been thoroughly investigated

**Section 12: Ecological Information**

**General information:** No data available

**Section 13: Disposal Information**

**Product disposal:** Place in a 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.

**Section 14: Transport Information**

**DOT:** No Data Available

**IMO/IMDG:** No data available

**IATA:** No Data Available

**Section 15: Regulatory Information**

**TSCA:** No Data Available

**SARA:** No Data Available

**Section 16: Other Information****NFPA Rating**

Health: 1  
Fire: 0  
Reactivity: 0

**HMIS Rating**

Health: 1  
Fire: 0  
Reactivity: 0  
Personal  
Protection: E

**Precautionary Label**

Irritant

**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.

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**Version Date:** 7/30/2015