Section 1: Company and Product Identification

**Product Name:** cis-Diamminedichloro Platinum (II)

**Product Code:** 6014

**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

**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

**Signal Word:** Danger

**Hazard Category:**
- Acute tox, oral Cat 1/2
- Acute tox, inh. Cat 4
- Acute tox, dermal Cat 4
- Skin corrosion/irritation Cat 2
- Serious eye damage/eye irritation Cat 1
- Specific target organ tox, single exp. Cat 3 (resp irrit)
- Carcinogenicity Cat 1

**Hazard Statements:**
- H300: Fatal if swallowed
- H332: Harmful if inhaled
- H312: Harmful in contact with skin
- H315: Causes skin irritation
- H318: Causes serious eye damage
- H335: May cause respiratory irritation
- H350: May cause cancer

**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+310: IF SWALLOWED: Immediately call a POISON CENTER or
- 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 comfortable for breathing
- P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
- P312: Call a POISON CENTER or doctor/physician if you feel unwell
- P330: Rinse mouth
- P332+313: If skin irritation occurs: Get medical advice/attention
- P337+313: If eye irritation persists get medical advice/attention
- P361: Remove/Take off immediately all contaminated clothing
- P403+233: Store in a well ventilated place. Keep container tightly closed
- P405: Store locked up
- P501: Dispose of contents/container in accordance with local/regional/national/international rules.
Section 3: Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous substance (name)</th>
<th>Hazard Category</th>
<th>CAS#</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>cis-Diamminedichloro Platinum (II)</td>
<td>OSHA Hazards: Carcinogen, Poison</td>
<td>15663-27-1</td>
<td>100</td>
</tr>
</tbody>
</table>

Section 4: First Aid Measures

**General Info:** Consult a physician, Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

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

- **If ingested:** Rinse mouth. Seek immediate medical attention. Clear the airway and administer artificial respiration if not breathing.
  - If swallowed, do not induce vomiting unless directed to do so by medical personnel.
- **If inhaled:** Remove the victim from the contaminated area while protecting yourself from exposure by wearing an appropriate respirator. Put a similar respirator on the victim if possible. Get medical attention immediately.

- **Eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do. Get medical attention if irritation develops or persists.

- **Skin contact:** Take off immediately all contaminated clothing. Rinse with water thoroughly. Get medical advice if irritation develops or persists.

**Additional Info:** Observe for any symptoms for several hours after exposure. Follow up with medical attention if symptoms develop.

Section 5: Fire Fighting Measures

**General Info:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Emits toxic fumes under fire conditions.

**Extinguishing Method / Equipment:** For small (incipient) fires, use water or other media such as alcohol-resistant foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water. Applied as a mist or spray; solid streams of water may be ineffective.

**Hazardous Decomposition Info:** Constituents associated with burning / combustion are to be considered toxic. Firefighters should wear self-contained breathing apparatus and full protective gear. Use NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

Section 6: Accidental Release Measures

**Personal Protection:** Evacuate area immediately. When cleaning up wear SCBA, rubber boots, and heavy rubber gloves. Keep personnel away from spill in upwind direction. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing dust/vapors. 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 and cleanup Procedures:** Large Spills: Contain actively spilling material if safe and easy to do so, avoid generating dust. Sweep up and place in a sealed container. Wash spill area after pick up is completed. Collect material and dispose of properly.

**Procedures:** Collect all contaminated media, or other cleanup materials into a waste receptacle. If cleaning surface is necessary, utilize vacuum cleaner, provided adequate ventilation is available.
Section 7: Handling and Storage

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

Precautions:
Ensure adequate ventilation. Avoid breathing dust/vapor. Avoid contact with eyes, skin, and clothing.
Avoid prolonged exposure. Wear appropriate personal protective equipment and wash thoroughly after handling.

Recommendations
Store in cool, dry area in a tightly closed product container in a dry cool place. This product is light and
for Storage: moisture sensitive. Store away from sources of ignition or flame.

Incompatibilities: Reducing Agents

Other Precautions:
0.01 ppm high efficiency particulate 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.

Section 8: Exposure Control / Personal Protection

General / Ventilation:
Local Exhaust: Required in handling area

Engineering Controls:
Mechanical: Desirable to insure concentration of material below TLV/TWA levels
Other: Closed ventilation system with corrosive resistant materials

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

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

Skin Protection:
Wear chemical resistant gloves.

Respiratory Protection:
Where risk assessment shows air-purifying respirators are appropriate use full-face particle respirator type
N((US) or type 92 (EN 143) respirator cartridges as a back up to engineering controls. If the respirators the
sole means of protection, use a full face supplied air respirator. Use respirators and components tested and
approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Additional Information:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
<th>Value</th>
<th>Control Parameters</th>
<th>Basis</th>
</tr>
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<tbody>
<tr>
<td>Cisplatin</td>
<td>15663-27-1</td>
<td>TWA</td>
<td>0.0020 mg/m^3</td>
<td>USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants</td>
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<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
</tbody>
</table>

Section 9: Physical and Chemical Properties

State: Solid/Crystalline
Melting Point: 60 °C
Freezing Point: N/A

Color: Yellow
Boiling Point/Range: Literature 270°C
pH: N/A

Molecular Wt.: N/A
Odor: none
Water solubility:

Evaporation rate: N/A
Flash Point: N/A
Part. Coeff (n-octanol/water) Vapor: N/A

Lower Flammability Limits: N/A
Pressure: N/A
Autoignition Temp: N/A

VOC Content (lbs/gal): N/A
Specific Gravity: 2.43 G/CM3

Section 10: Stability and Reactivity

General: Stable under recommended storage conditions

Incompatible materials: Strong oxidizing agents

Decomposition products: Hazardous decomposition products formed under fire conditions. - No data available
Section 11: Toxicological Information

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

Toxicological Acute Toxicity: Information
LD50 Oral - rat - 25.8 mg/kg

Skin Corrosion / Irritation
No data available

Serious Eye Damage/ Eye Irritation
No data Available

Respiratory or skin sensitization
Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

Germ Cell Mutagenicity
No data available
+C122

Carcinogenicity - mouse - Intraperitoneal
Tumorigenic: Neoplastic by RTECS criteria. Skin and Appendages: Other: Tumors. Tumorigenic Effects: Uterine
+C122
Tumorigenic: Carcinogenic by RTECS criteria. Lungs, Thorax, or Respiration: Tumors.
Possible human carcinogen
IARC: 2A - Group 2A: Probably carcinogenic to humans (Cisplatin)

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: Reasonably anticipated to be a human carcinogen (Cisplatin)

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive Toxicity
No data available

Specific target organ toxicity – single exposure (GHS)
No data available

Likely Routes of Exposure:
- Eye Contact
- Skin Contact
- Inhalation
- Ingestion - possible, but considered unlikely.

Toxicological Information (contained substances)

Carcinogenicity or mutagenicity: No data available
Sensitization: Product is not expected to be a sensitizer.

Section 12: Ecological Information

General: Product not tested.

Aquatic toxicity: No specific data available. Do not allow large quantities of product to reach water, ground water, water courses or sewer systems.

Degradation / Mobility info: No specific data available.

Bioaccumulative potential: No specific data available.
Section 13: Disposal Information

**Product disposal:** Dispose of product in accordance with local, regional, and national regulations. Consult with waste contractor.

**Container disposal:** Treat empty containers with extra care. Consult waste contractor.

**Other considerations:** Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. 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:** Proper Shipping Name: cis-Diamminedichloro Platinum (II)
UN number: 3288 Class: 6.1 Packing group: II
Proper shipping name: Toxic solid, inorganic, n.o.s. (Cisplatin)
Reportable Quantity (RQ):
Marine pollutant: No
Poison Inhalation Hazard: No

**IMDG**
UN number: 3288 Class: 6.1 Packing group: II EMS-No: F-A, S-A
Proper shipping name: TOXIC SOLID, INORGANIC, N.O.S. (Cisplatin)
Marine pollutant: No

**IATA:**
UN number: 3288 Class: 6.1 Packing group: II
Proper shipping name: Toxic solid, inorganic, n.o.s. (Cisplatin)

**OTHER:** Inquire for further transport information.

Section 15: Regulatory Information

**OSHA Hazards:** Carcinogen, Poisonous, Irritant

**TSCA/SARA:**
SARA 302: This material does not contain any chemical components SARA Title III, Section 302 reporting requirements.
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards: Acute Health Hazard, Chronic Health Hazard

**States Right to Know:**
Massachusetts Right To Know Components: Cisplatin, CAS # 15663-27-1,Revision Date: 1993-04-24
Pennsylvania Right To Know Components: Cisplatin, CAS # 15663-27-1,Revision Date: 1993-04-24
New Jersey Right To Know Components: Cisplatin, CAS # 15663-27-1,Revision Date: 1993-04-24
California Prop. 65 Components: WARNING! This product contains a chemical known to the State of California to cause cancer. Cisplatin, CAS # 15663-27-1,Revision Date: 2007-09-28

**OTHER:** All information included is believed to be correct but no claims are made that it is all inclusive. Use this information only as a guide. The information in this document is based on our current information and knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product Colonial Metals, Inc. does not accept nor shall we be held liable for any damage resulting from handling or from contact with this or any of our products.

Section 16: Other Information

**NFPA Rating**
Health: 3
Fire: 0
Reactivity: 0
Poison

**HMIS Rating**
Health: 3
Fire: 0
Reactivity: 0
Personal Protection: J

**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 believe 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.

**SDS Author:** John Kerchner

**Version Date:** 7/27/2015