**Section 1: Company and Product Identification**

**Product Name:** Chlorobis(cyclooctene) Iridium (I) Dimer  
**Product Code:** 3040  
**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**

**Hazard Pictograms:**

**Signal Word:** Warning  
**Hazard Category:**  
Acute tox, oral Cat 5  
Skin corrosion/irritation Cat 2  
Serious eye damage/eye irritation Cat 2  
Aspiration hazard Cat 2  

**Hazard Statements:**  
H303: May be harmful if swallowed  
H315: Causes skin irritation  
H319: Causes serious eye irritation  
H305: May be harmful if swallowed and enters airways  

**Precautionary Statements:**  
P202: Do not handle until all safety precautions have been read and understood  
P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking  
P264: Wash thoroughly after handling  
P280: Wear protective gloves/protective clothing/eye protection/face protection  
P308+313: IF exposed or concerned: Get medical advice/attention  
P403+233: Store in a well ventilated place. Keep container tightly closed  
P501: Dispose of contents/container in accordance with local/national/international rules.

**Hazards not otherwise classified:**  
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 have not been thoroughly investigated.

**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>Chlorobis(cyclooctene) Iridium (I) Dimer</td>
<td>Irritant</td>
<td>12246-51-4</td>
<td></td>
</tr>
</tbody>
</table>

**Product Name:** Chlorobis(cyclooctene) Iridium (I) Dimer  
**Chemical Formula:** [IrCl(C8H12)2]2  
**Synonyms:** Di-μ-chlorotetrakis(cyclooctene)diiridium
### Section 4: First Aid Measures

**General Info:** Ensure proper ventilation.

**Notable Exposure** Irritation to skin, eyes and areas of contact. Causes respiratory tract irritation

**Symptoms:**

If ingested: Rinse mouth. Not expected to be a problem in industry. However if swallowed and discomfort occurs, contact a physician.

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. Contact a physician.

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:** Emits toxic fumes under fire conditions.

**Extinguishing** Use CO2 (Carbon Dioxide), dry chemical, or foam.

**Method / Equipment:**

- **Hazardous** Carbon oxides, Hydrogen chloride gas, Iridium oxides. Constituents associated with burning /

**Decomposition Info:** combustion are to be considered toxic. Firefighters should wear self-contained breathing apparatus and full protective gear.

### Section 6: Accidental Release Measures

**Personal Precautions,** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all protective equipment and procedures:

- **Containment Large Spills:** Contain actively spilling material if safe and easy to do so, avoid generating dust.
- **Equipment and Procedures:** Small Spills: Small spills can be mixed with vermiculite, sodium carbonate or other suitable noncombustible adsorbent and swept up. Sweep and collect to waste receptacles.

**Cleanup 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. 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.

**Recommendations for Storage:** Store in cool, dry area in a tightly closed product container away from sources of ignition or flame.

**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 / Engineering** Ventilation: Local Exhaust: Yes

**Controls:** Mechanical: Yes

**Work Clothing:** Protective work clothing which covers skin and prevents exposures. Lab coat/apron, flame and chemical resistant protective clothing, eye wash, safety shower, and hygiene facilities for washing.

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

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

**Respiratory** For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Section 9: Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>Solid</td>
</tr>
<tr>
<td>Melting Point</td>
<td>160 - 165 °C (320 - 329 °F) - dec.</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Color</td>
<td>Powder</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>N/A</td>
</tr>
<tr>
<td>Molecular Wt.</td>
<td>888.08</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>N/A</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>N/A</td>
</tr>
<tr>
<td>Flash Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Part. Coeff (n-octanol/water)</td>
<td>N/A</td>
</tr>
<tr>
<td>Upper Flam Limits</td>
<td>N/A</td>
</tr>
<tr>
<td>Lower Flam Limits</td>
<td>N/A</td>
</tr>
<tr>
<td>VOC Content (lbs/gal)</td>
<td>N/A</td>
</tr>
<tr>
<td>Viscosity</td>
<td>N/A</td>
</tr>
<tr>
<td>Autoignition Temp</td>
<td>N/A</td>
</tr>
</tbody>
</table>

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 oxides, Hydrogen chloride gas, Iridium oxides

Section 11: Toxicological Information

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

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

**Carcinogenicity or mutagenicity:** No data available

**Sensitization:** Product is not expected to be a sensitizer.

Section 12: Ecological Information

**General information:** 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:** Consult Federal EPA, State and local regulations for proper disposal/recycle/reclamation

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

**Other considerations:** 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:** Considered non-hazardous for transport.

**IMO/IMDG:** Considered non-hazardous for transport.

**IATA:** Considered non-hazardous for transport.
Section 15: Regulatory Information

TSCA: This product is not TSCA listed

SARA : SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
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
No SARA Hazards

Right to Know Massachusetts Right To Know Components
Components: No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components
Chlorobis(cyclooctene)iridium(I)dimer
CAS-No. 12246-51-4 Revision Date

New Jersey Right To Know Components
Chlorobis(cyclooctene)iridium(I)dimer
CAS-No. 12246-51-4 Revision Date

Canadian DSL: 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.

Section 16: Other Information

<table>
<thead>
<tr>
<th>NFPA Rating</th>
<th>HMIS Rating</th>
<th>US CLASSIFICATION AND LABEL TEXT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health: 0</td>
<td>Health: 0</td>
<td>Indication of Danger: Irritant.</td>
</tr>
<tr>
<td>Fire: 0</td>
<td>Fire: 0</td>
<td>Risk Statements: Irritating to eyes, respiratory system and skin.</td>
</tr>
<tr>
<td>Reactivity: 0</td>
<td>Reactivity: 0</td>
<td>Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.</td>
</tr>
<tr>
<td>Personal Protection: C</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 believe to be correct; however, you (the customer), should preform 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: 9/8/2015