SAFETY DATA SHEET

WC-731-1 / 1350VM products

Section 1. Identification

GHS product identifier  :  WC-731-1 / 1350VM products
Product code            :  WC-731 products
Other means of identification  :  WC-731-1 / 1350VM (011117)
Product type            :  Powder.

Relevant identified uses of the substance or mixture and uses advised against
Not applicable.

Supplier's details       :  Praxair Surface Technologies, Inc.
                          :  1555 Main Street
                          :  Indianapolis, IN  46224
                          :  USA
                          :  317-240-2650

Emergency telephone number (with hours of operation)  :  317-240-2332 7:00am - 3:30pm ET Mon-Fri
                                                        :  Chemtrec: 1-800-424-9300

Section 2. Hazards identification

OSHA/HCS status          :  This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture :  COMBUSTIBLE DUSTS
                                                 :  EYE IRRITATION - Category 2B
                                                 :  CARCINOGENICITY - Category 2
Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 100%
Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 100%
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 100%

GHS label elements

Hazard pictograms        :

Signal word              :  Warning
Hazard statements        :  May form combustible dust concentrations in air.
                          :  Causes eye irritation.
                          :  Suspected of causing cancer.

Precautionary statements

Prevention               :  Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Wash hands thoroughly after handling.
Response                 :  IF exposed or concerned: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
Storage                  :  Store locked up.
Disposal                 :  Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements :  Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.
Section 2. Hazards identification

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other means of identification</td>
<td>WC-731-1 / 1350VM (011117)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product code</th>
<th>WC-731 products</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>tungsten</td>
<td>≥75 - ≤90</td>
<td>7440-33-7</td>
</tr>
<tr>
<td>cobalt</td>
<td>≥10 - ≤25</td>
<td>7440-48-4</td>
</tr>
<tr>
<td>carbon</td>
<td>≥10 - ≤25</td>
<td>7440-44-0</td>
</tr>
<tr>
<td>chromium</td>
<td>≤5</td>
<td>7440-47-3</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

**Description of necessary first aid measures**

**Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

**Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Most important symptoms/effects, acute and delayed**

**Potential acute health effects**

**Eye contact** : Causes eye irritation.

**Inhalation** : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

**Over-exposure signs/symptoms**
Section 4. First aid measures

**Protection of first-aiders**: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

**Notes to physician**: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments**: No specific treatment.

**Skin contact**
- Adverse symptoms may include the following:
  - irritation
  - watering
  - redness

**Inhalation**
- Adverse symptoms may include the following:
  - respiratory tract irritation
  - coughing

**Ingestion**
- No specific data.

**Indication of immediate medical attention and special treatment needed, if necessary**

**Eye contact**: May form explosible dust-air mixture if dispersed.

**Extinguishing media**

**Suitable extinguishing media**
- Use dry chemical powder.

**Unsuitable extinguishing media**
- Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.

**Special protective actions for fire-fighters**
- Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters**
- Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

**Extinguishing media**

**Suitable extinguishing media**
- Use dry chemical powder.

**Unsuitable extinguishing media**
- Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.

**Specific hazards arising from the chemical**
- May form explosible dust-air mixture if dispersed.

**Hazardous thermal decomposition products**
- Decomposition products may include the following materials:
  - carbon dioxide
  - carbon monoxide
  - metal oxide/oxides

**Special protective actions for fire-fighters**
- Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters**
- Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

**Environmental precautions**
- Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
**Section 6. Accidental release measures**

**Methods and materials for containment and cleaning up**

**Small spill**
Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

**Large spill**
Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, watercourses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

**Section 7. Handling and storage**

**Precautions for safe handling**

**Protective measures**
Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene**
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities**
Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

**Section 8. Exposure controls/personal protection**

**Control parameters**

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>tungsten</td>
<td>ACGIH TLV (United States, 3/2016). TWA: 5 mg/m³, (as W) 8 hours. STEL: 10 mg/m³, (as W) 15 minutes.</td>
</tr>
<tr>
<td></td>
<td>NIOSH REL (United States, 10/2013). TWA: 5 mg/m³, (as W) 10 hours. STEL: 10 mg/m³, (as W) 15 minutes.</td>
</tr>
<tr>
<td>cobalt</td>
<td>OSHA PEL 1989 (United States, 3/1989). Notes: as Co TWA: 0.05 mg/m³, (as Co) 8 hours.</td>
</tr>
</tbody>
</table>

*Date of issue/Date of revision: 12/13/2017*
## Section 8. Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Substance</th>
<th>Notes:</th>
<th>TWA</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>carbon</td>
<td></td>
<td>0.1 mg/m³,</td>
<td>Dust and fumes</td>
</tr>
<tr>
<td>chromium</td>
<td></td>
<td>0.05 mg/m³,</td>
<td>Inorganic</td>
</tr>
<tr>
<td></td>
<td>Notes:</td>
<td>8 hours</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 hours</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ACGIH TLV (United States, 3/2016).</td>
<td>TWA: 0.02 mg/m³,</td>
<td>Inorganic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8 hours</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ACGIH TLV (United States, 3/2016).</td>
<td>Inhalation sensitizer.</td>
<td>Thoracic fraction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA: 0.005 mg/m³</td>
<td>8 hours.</td>
</tr>
<tr>
<td></td>
<td>NIOSH REL (United States, 10/2013).</td>
<td>TWA: 0.5 mg/m³,</td>
<td>8 hours.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>measured as Cr</td>
<td>8 hours.</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (United States, 3/1989).</td>
<td>TWA: 1 mg/m³,</td>
<td>8 hours.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(as Cr) 8 hours.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (United States, 6/2016).</td>
<td>TWA: 1 mg/m³,</td>
<td>(as Cr) 8 hours.</td>
</tr>
</tbody>
</table>

### Appropriate engineering controls
- Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

### Environmental exposure controls
- Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

#### Hygiene measures
- Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing.
- Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

#### Eye/face protection
- Safety eyewear complying with an approved standard should be used to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection:
  - Chemical splash goggles. If operating conditions cause high dust concentrations to be produced, use dust goggles.

#### Skin protection
- Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

#### Hand protection
- Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Section 8. Exposure controls/personal protection

**Other skin protection**: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection**: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

**Appearance**

- Physical state: Solid. [Powder.]
- Color: Gray.
- Odor: Odorless
- Odor threshold: Not available.
- pH: Not available.
- Melting point: 3410°C (6170°F)
- Boiling point: Not available.
- Flash point: Not available.
- Evaporation rate: Not available.
- Flammability (solid, gas): Not available.
- Lower and upper explosive (flammable) limits: Not available.

**Vapor pressure**: Not available.

**Vapor density**: Not available.

**Relative density**: Not available.

**Solubility**: Insoluble in the following materials: cold water and hot water.

**Solubility in water**: Not available.

**Partition coefficient: n-octanol/water**: Not available.

**Auto-ignition temperature**: Not available.

**Decomposition temperature**: Not available.

**Viscosity**: Not available.

**Flow time (ISO 2431)**: Not available.

**VOC content**: Not available. 0 lbs/gal (0 g/l)

Section 10. Stability and reactivity

**Reactivity**: No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability**: The product is stable.

**Possibility of hazardous reactions**: Under normal conditions of storage and use, hazardous reactions will not occur.
Section 10. Stability and reactivity

Conditions to avoid: Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.

Incompatible materials: Reactive or incompatible with the following materials:
oxidizing materials

Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity
Not available.

Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>tungsten</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td>-</td>
</tr>
</tbody>
</table>

Sensitization
Not available.

Mutagenicity
Not available.

Carcinogenicity
Not available.

Classification

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>OSHA</th>
<th>IARC</th>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>cobalt</td>
<td>-</td>
<td>2B</td>
<td>-</td>
</tr>
<tr>
<td>chromium</td>
<td>-</td>
<td>3</td>
<td>-</td>
</tr>
</tbody>
</table>

Reproductive toxicity
Not available.

Teratogenicity
Not available.

Specific target organ toxicity (single exposure)
Not available.

Specific target organ toxicity (repeated exposure)
Not available.

Aspiration hazard
Not available.

Information on the likely routes of exposure
Not available.

Potential acute health effects

Eye contact: Causes eye irritation.
Section 11. Toxicological information

**Inhalation**
- Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

**Skin contact**
- No known significant effects or critical hazards.

**Ingestion**
- No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Eye contact**
- Adverse symptoms may include the following:
  - irritation
  - watering
  - redness

**Inhalation**
- Adverse symptoms may include the following:
  - respiratory tract irritation
  - coughing

**Skin contact**
- No specific data.

**Ingestion**
- No specific data.

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Short term exposure**

**Potential immediate effects**
- Not available.

**Potential delayed effects**
- Not available.

**Long term exposure**

**Potential immediate effects**
- Not available.

**Potential delayed effects**
- Not available.

**Potential chronic health effects**
- Not available.

- **General**
  - Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

- **Carcinogenicity**
  - Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

- **Mutagenicity**
  - No known significant effects or critical hazards.

- **Teratogenicity**
  - No known significant effects or critical hazards.

- **Developmental effects**
  - No known significant effects or critical hazards.

- **Fertility effects**
  - No known significant effects or critical hazards.

**Numerical measures of toxicity**

**Acute toxicity estimates**
- Not available.

### Section 12. Ecological information

**Toxicity**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>chromium</td>
<td>Acute EC50 0.2 ppm Marine water</td>
<td>Algae - Bacillariophyta</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 5 ppm Marine water</td>
<td>Algae - Macroystis pyrifera - Young</td>
<td>4 days</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 35000 µg/l Fresh water</td>
<td>Aquatic plants - Lemna minor</td>
<td>4 days</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 45 µg/l Fresh water</td>
<td>Crustaceans - Ceriodaphnia reticulata</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 22 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 13.9 ppm Fresh water</td>
<td>Fish - Anguilla rostrata</td>
<td>96 hours</td>
</tr>
</tbody>
</table>

**Date of issue/Date of revision**
- 12/13/2017

WC-731 products
Section 12. Ecological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP_{ow}</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>cobalt</td>
<td>-</td>
<td>15600</td>
<td>high</td>
</tr>
</tbody>
</table>

Persistence and degradability
Not available.

Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP_{ow}</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>cobalt</td>
<td>-</td>
<td>15600</td>
<td>high</td>
</tr>
</tbody>
</table>

Mobility in soil

| Soil/water partition coefficient (K_{oc}) | Not available. |

Other adverse effects
No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods
The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

<table>
<thead>
<tr>
<th>UN number</th>
<th>DOT Classification</th>
<th>TDG Classification</th>
<th>Mexico Classification</th>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Packing group</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Additional information</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Special precautions for user
Transport within user’s premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Date of issue/Date of revision: 12/13/2017
### Section 14. Transport information

Transport in bulk according to Annex II of MARPOL and the IBC Code: Not available.

### Section 15. Regulatory information

**U.S. Federal regulations**

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)**
- Not listed

**Clean Air Act Section 602 Class I Substances**
- Not listed

**Clean Air Act Section 602 Class II Substances**
- Not listed

**DEA List I Chemicals (Precursor Chemicals)**
- Not listed

**DEA List II Chemicals (Essential Chemicals)**
- Not listed

**SARA 302/304**

**Composition/information on ingredients**

No products were found.

**SARA 304 RQ**
- Not applicable.

**SARA 311/312**

**Classification**
- Fire hazard
  - Immediate (acute) health hazard
  - Delayed (chronic) health hazard

**Composition/information on ingredients**

<table>
<thead>
<tr>
<th>Name</th>
<th>Fire hazard</th>
<th>Sudden release of pressure</th>
<th>Reactive</th>
<th>Immediate (acute) health hazard</th>
<th>Delayed (chronic) health hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>tungsten</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>cobalt</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**SARA 313**

<table>
<thead>
<tr>
<th>Product name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>cobalt</td>
<td>7440-48-4</td>
<td>≥10 - ≤25</td>
</tr>
<tr>
<td>cobalt</td>
<td>7440-47-3</td>
<td>≤5</td>
</tr>
<tr>
<td>chromium</td>
<td>7440-48-4</td>
<td>≥10 - ≤25</td>
</tr>
<tr>
<td>chromium</td>
<td>7440-47-3</td>
<td>≤5</td>
</tr>
</tbody>
</table>

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

**State regulations**

**Massachusetts**
- The following components are listed: TUNGSTEN; COBALT; CHROMIUM

**New York**
- The following components are listed: Chromium

**New Jersey**
- The following components are listed: TUNGSTEN; COBALT; CHROMIUM

**Pennsylvania**
- The following components are listed: TUNGSTEN; COBALT FUME; CHROMIUM COMPOUNDS

**Date of issue/Date of revision**: 12/13/2017
Section 15. Regulatory information

**California Prop. 65**

**WARNING:** This product contains a chemical known to the State of California to cause cancer.

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Cancer</th>
<th>Reproductive</th>
<th>No significant risk level</th>
<th>Maximum acceptable dosage level</th>
</tr>
</thead>
<tbody>
<tr>
<td>cobalt</td>
<td>Yes.</td>
<td>No.</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**International regulations**

**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

**Montreal Protocol (Annexes A, B, C, E)**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

**International lists**

**National inventory**

Australia: All components are listed or exempted.
Canada: All components are listed or exempted.
China: All components are listed or exempted.
Europe: All components are listed or exempted.
Malaysia: Not determined.
New Zealand: All components are listed or exempted.
Philippines: All components are listed or exempted.
Republic of Korea: All components are listed or exempted.
Taiwan: All components are listed or exempted.
Turkey: Not determined.

Section 16. Other information

**Procedure used to derive the classification**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMBUSTIBLE DUSTS</td>
<td>On basis of test data</td>
</tr>
<tr>
<td>EYE IRRITATION - Category 2B</td>
<td>Calculation method</td>
</tr>
<tr>
<td>CARCINOGENICITY - Category 2</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

**History**

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Date of issue/Date of revision: 12/13/2017

Date of issue/Date of revision: 12/13/2017
Section 16. Other information

Key to abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE</td>
<td>Acute Toxicity Estimate</td>
</tr>
<tr>
<td>BCF</td>
<td>Bioconcentration Factor</td>
</tr>
<tr>
<td>GHS</td>
<td>Globally Harmonized System of Classification and Labelling of Chemicals</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IBC</td>
<td>Intermediate Bulk Container</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods</td>
</tr>
<tr>
<td>LogPow</td>
<td>logarithm of the octanol/water partition coefficient</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
</tbody>
</table>

References

Not available.

Notice to reader

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