MATERIAL SAFETY DATA SHEET

Section 1- PRODUCT IDENTIFICATION

<table>
<thead>
<tr>
<th>COMPOSITION</th>
<th>PRODUCT NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>WC</td>
<td>Tungsten Carbide</td>
</tr>
</tbody>
</table>

Section 2- HAZARDOUS INGREDIENTS

Note: Products under normal conditions do not represent an inhalation, ingestion or contact health hazard.

<table>
<thead>
<tr>
<th>MATERIAL OR COMPONENT</th>
<th>CAS NUMBER</th>
<th>WT%</th>
<th>EXPOSURE LIMITS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>OSHA PEL (Mg/M3)</td>
</tr>
<tr>
<td>Tungsten Carbide</td>
<td>12070-12-1</td>
<td>0.0-100.0</td>
<td>NE</td>
</tr>
</tbody>
</table>

Section 3- PHYSICAL DATA

<table>
<thead>
<tr>
<th>MATERIAL IS (AT NORMAL CONDITIONS)</th>
<th>APPERANCE AND ODOR</th>
<th>SPECIFIC GRAVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Liquid □ Solid □ Gas □ Other</td>
<td>Black Powder, No Odor</td>
<td>13.6gm/cc at 18.0</td>
</tr>
<tr>
<td>MELTING POINT (BASE METAL)</td>
<td>Not Applicable</td>
<td></td>
</tr>
</tbody>
</table>

Section 4- FIRE AND EXPLOSION

<table>
<thead>
<tr>
<th>Flash Point (Method Used)</th>
<th>Flammable Limits</th>
<th>LEL</th>
<th>UEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>Non-Flammable</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

EXTINGUISHING MEDIA

N/A. Use suitable extinguishing media for surrounding materials and type of fire.

SPECIAL FIRE FIGHTING PROCEDURES

Wear full face self contained breathing apparatus with full protective clothing to prevent contact with skin & eyes. Isolate runoff to prevent environmental pollution.

UNUSUAL FIRE AND EXPLOSION HAZARDS

May emit toxic fumes if involved in fire. Oxidizes on heating in air. Burns in fluorine at room temperature. Ignites at 600C in nitrogen oxide atmosphere. May have violent reaction with F2, CIF3, NOx, IF5, PbO2, NO2, N2O

Section 5- REACTIVITY DATA

<table>
<thead>
<tr>
<th>STABILITY</th>
<th>INCOMPATABILITY (MATERIALS TO AVOID)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stable</td>
<td>Chlorine, fluorine, nitrogen dioxide, iodine, pentafluoride and lead oxide</td>
</tr>
</tbody>
</table>

CONDITIONS TO AVOID

None

HAZARDOUS DECOMPOSITION PRODUCTS

None recorded
Section 6- HEALTH HAZARD GUIDE

**MAJOR EXPOSURE HAZARD**

- ☐ Inhalation
- ☐ Skin
- ☐ Skin Absorption
- ☐ Eye Contact
- ☐ Ingestion

**EFFECTS OF OVEREXPOSURE**

**INHALATION**: ACUTE: Toxic by inhalation. May cause irritation to the mucous membranes, coughing, dyspnea, soreness of the chest, weight loss, hemoptysis, bronchitis, asthma, pulmonary fibrosis and radiological changes in the lungs. **CHRONIC**: May cause damage to the lungs.

**SKIN CONTACT**: ACUTE: May cause irritation. **CHRONIC**: No chronic health effect recorded.

**EYE CONTACT**: ACUTE: May cause irritation. **CHRONIC**: May cause conjunctivitis.

**INGESTION**: ACUTE: May cause irritation to the gastrointestinal tract and diarrhea. **CHRONIC**: No chronic health effects recorded.

**TARGET ORGANS**: May affect respiratory system.

**EMERGENCY & FIRST AID PROCEDURES**

**INHALATION**: Remove victim from exposed area to fresh air, keep warm and quiet. Give oxygen if breathing is difficult and seek medical attention.

**SKIN CONTACT**: Remove contaminated clothing and shoes immediately. Brush material off skin and wash affected area with mild soap and water. Seek medical attention if symptoms persist.

**EYE CONTACT**: Flush eyes with lukewarm water, lifting upper and lower eyelids for at least 15 minutes. Seek medical attention if symptoms persist.

**INGESTION**: Give 1-2 glasses of milk or water and induce vomiting; seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person.

Section 7 - SPILL OR LEAK PROCEDURES

**SPILL OR LEAK PROCEDURES**

Wear a self contained breathing apparatus and full protective clothing. Isolate the area where the spill occurred and insure that proper ventilation is available. Vacuum up spill using High Efficiency Particulate Absolute air filter and place in a container for proper disposal. Take care not to raise dust.

**WASTE DISPOSAL METHODS**

Observe all federal, state and local regulations when storing or disposing of this substance.

Section 8 - SPECIAL PROTECTION

**RESPIRATORY**

NIOSH approved dust, mist, vapor cartridge respirator.

**VENTILATION**

Maintain concentration below TLV.

**EYE PROTECTION & PROTECTIVE CLOTHING**

Use safety glasses. Wear neoprene protective gloves. Use protective gear suitable to prevent contamination.

Section 9 - SPECIAL PRECAUTIONS

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