SAFETY DATA SHEET

SECTION 1  IDENTIFICATION

PRODUCT NAME:  Technon® Tungsten Powder
PRODUCT NUMBER:  -100 Mesh, -325 Mesh
CAS NUMBER:  7440-33-7

MANUFACTURER:
Tungsten Heavy Powder & Parts
9097 Kenamar Drive
San Diego, CA 92121

PHONE:  858-693-6100
FAX:  858-693-8471
REVISION DATE:  11/2015

IN CASE OF EMERGENCY, CONTACT CHEM-TREC:  1-800-424-9300

SECTION 2  HAZARDS IDENTIFICATION

CLASSIFICATION OF SUBSTANCE OR MIXTURE

Pictogram

Signal Word  Warning

Hazard Statements

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

Precautionary Phrases

P261  Avoid breathing dust.
P264  Wash skin thoroughly after handling.
P271  Use only outdoors or in a well-ventilated area.
P280  Wear protective gloves/eye protection/face protection
P303+P352  IF ON SKIN: Wash with plenty of soap and water.
P304+P340+P312  IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison center / doctor if you feel unwell.
P305+P351+P338  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P332+P313  If skin irritation occurs: Get medical advice/attention.
P337+P313  If eye irritation persists: Get medical advice/attention.
P363  Wash contaminated clothing before reuse.
P370+P378  In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction
SECTION 2  HAZARDS IDENTIFICATION (continued)

EYE CONTACT: The dust causes slight to mild irritation of the eyes.
SKIN CONTACT: The dust causes slight to mild irritation of the skin.
INHALATION: Irritating to the respiratory tract.
INGESTION (Acute): None
INGESTION (Chronic): Large overdoses may cause nervous system disturbances, and diarrhea.

SECTION 3  COMPOSITION / INFORMATION ON INGREDIENTS

ELEMENT SYMBOL: W
SYNONYMS: Wolfram, high-density tungsten powder

<table>
<thead>
<tr>
<th>CHEMICAL</th>
<th>CAS #</th>
<th>PERCENT</th>
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<td>7440-33-7</td>
<td>100</td>
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</table>

SECTION 4  FIRST AID MEASURES

EYE EXPOSURE: In case of eye contact, rinse with plenty of water and seek medical attention if symptoms persist.
SKIN EXPOSURE: Immediately flush with plenty of water for at least 15 minutes. Remove contaminated clothing. Wash skin using soap. Get medical attention if symptoms persist.
INHALATION: Remove to fresh air and keep comfortable for breathing. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if symptoms persist.
INGESTION: Give 1-2 glasses of milk or water and induce vomiting, seek medical attention if symptoms persist. Never induce vomiting by giving anything by mouth to an unconscious person.

SECTION 5  FIREFIGHTING MEASURES

FLASH POINT: Not available
AUTO IGNITION TEMPERATURE: Not available
FLAMMABLE LIMITS: Not available
EXTINGUISHING MEDIUM: Cover burning material with an inert powder, such as dry sand or limestone, to exclude oxygen. Fine dust generated during grinding operations may ignite if allowed to accumulate and subjected to an ignition source. Tungsten rod, wire and fabricated products are not a fire hazard.
SPECIAL FIRE FIGHTING PROCEDURES: For a fire confined to a small area, use a respirator approved for toxic dusts and fumes. For a large fire involving this material, firefighters must wear approved, self-contained breathing apparatus.
HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS: Dust may present a fire or explosion hazard under favoring conditions of particle size, dispersion and strong ignition source. However, this is not expected to be a problem under normal handling conditions. Technon® powder does not generate any hazardous decomposition products.

SECTION 6  ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:
Respiratory Protection: Avoid breathing dust. Use an appropriate NIOSH-approved respirator when airborne dust concentrations exceed the Threshold Limit Value (TLV), See (29CFR 1910.134). Use local exhaust ventilation, which is adequate to limit personal exposure to levels, which do not exceed the TLV. If such equipment is not available, use respirators as specified above.
Skin Protection: Rubber gloves should be worn.
Eye Protection: Safety goggles or glasses are recommended.
ENVIRONMENTAL PRECAUTIONS: Tungsten is environment friendly, so no hazardous environmental precautions exist.
METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Ventilate area through non-mechanical means (e.g. opening a window). Take care not to raise dust. Use non-sparking tools. Clean up using methods, which avoid dust, generation such as vacuuming (with appropriate filter to prevent airborne dust levels which exceed the TLV), wet dust mop or wet clean up. If airborne dust is generated, use an appropriate NIOSH-approved respirator.
SECTION 7  HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Wear appropriate personal protective equipment. Use with adequate ventilation. Wash thoroughly after handling, before eating or smoking, and at the end of the work shift. Keep container closed when not in use. Avoid formation of dust. Do not shake clothing or other items to remove dust; use a vacuum instead.

CONDITIONS FOR SAFE STORAGE: Store in cool, dry, and well-ventilated, controlled area. Keep away from incompatible materials.

SECTION 8  EXPOSURE CONTROLS AND PERSONAL PROTECTION

<table>
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<tr>
<th>Component</th>
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<th>Typical Weight (%)</th>
<th>Exposure Limits</th>
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<td>5 mg/m³</td>
<td>TLV</td>
<td>ACGIH</td>
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<td>10 mg/m³</td>
<td>STEL</td>
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<td>OSHA</td>
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<td></td>
<td>10 mg/m³</td>
<td>STEL</td>
<td>NIOSH</td>
</tr>
</tbody>
</table>

STEL: Short Term Exposure Limit during x minutes.  
TLV: Threshold Limit Value over 8 hours of work.  
REL: Recommended Exposure Limit  
PEL: Permissible Exposure Limit

EYE PROTECTION: Wear chemical safety glasses or goggles.  
SKIN PROTECTION: Wear nitrile or rubber gloves, apron, or lab coat.  
RESPIRATOR: Use an approved respirator  
VENTILATION: Provide local exhaust, preferably mechanical.  
ADDITIONAL PROTECTION: Provide eyewash station, and washing facilities accessible to areas of use and handling.

SECTION 9  PHYSICAL AND CHEMICAL PROPERTIES

COLOR AND FORM: Dark gray powder  
ODOR: None

MELTING POINT: 3410°C (6170°F)  
MOLECULAR WEIGHT: 183.85

BOILING POINT: 5660°C (10220°F)  
RELATIVE DENSITY: 11 g/cc ± 0.5 g/cc (0.4 lb/inch³ ± 0.02 lbs/inch³)

UPPER/LOWER FLAMMABILITY LIMITS: N/A  
SOLUBILITY: Insoluble

SECTION 10  STABILITY AND REACTIVITY

STABILITY: Stable  
HAZARDOUS POLYMERIZATION: Will not occur  
CONDITIONS TO AVOID: Sparks  
INCOMPATIBILITY: Strong oxidizing agents and halogens

DECOMPOSITION PRODUCTS: Tungsten Oxide

SECTION 11  TOXICOLOGICAL DATA

ACUTE TOXICITY: Standard Draize test (skin) – rabbit – 500mg / 24h. Standard Draize test (eye) – rabbit 500mg / 24h. LD₅₀ Intraperitoneal – rat – 5g/kg, LD₅₀ – rabbit & dog – >20000mg tungsten metal/kg body weight  
CARCINOGENIC EFFECTS: No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen.

MUTAGENIC EFFECTS: Not available  
TETRATOGENIC EFFECTS: Not available  
REPRODUCTIVE EFFECTS: Not available.

RTECS: Y07175000

To the best of our knowledge, the toxicological effects of tungsten have not been extensively studied.
SECTION 12  ECOLOGICAL DATA

MOBILITY/DEGRADABILITY: Will convert to tungsten oxide during prolonged contact with water.
ECOTOXICITY: Tungsten is not ecotoxic. Generally not hazardous to water.

SECTION 13  DISPOSAL CONSIDERATIONS

This material must be disposed of in accordance with any and all applicable local, state and federal regulations. Material intended for disposal may be sold for scrap or reclamation.

SECTION 14  TRANSPORTATION DATA

D.O.T. TRANSPORTATION DATA: (49 CFR 172.101)  
SHIPPING NAME: Tungsten Powder  
HAZARD CLASS: None  
LABEL: No class label assigned.

SECTION 15  REGULATORY INFORMATION

DOT: Not regulated
SARA (TITLE III): Under applicable definitions, this material may meet the criteria for a delayed (chronic) health hazard.
SARA (SECTION 313): Tungsten is not subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.
CALIFORNIA PROP. 65: Not Listed
TSCA: Listed in the TSCA inventory
DSCL (EEC): Listed on the DSCL inventory
RCRA HAZARDOUS WASTE NUMBER: Not Listed

SECTION 16  OTHER INFORMATION

REASON FOR ISSUE: To comply with the new Globally Harmonized System of Classification & Labelling of Chemicals (GHS)
PREPARED BY: G. Sery
APPROVED BY: J. Sery
APPROVED DATE: November 18, 2015
SUPERSEDES DATE: April 10, 2014

DISCLAIMER: The information herein is believed to be accurate and reliable as of the date compiled. However, Tungsten Heavy Powder & Parts makes no representation, warranty, or guarantee of any kind with respect to the information in this document or any use of the product based on the information.
DATE LAST REVISED: November 18, 2015