

SATURN INDUSTRIES, INC.
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*****MATERIAL SAFETY DATA SHEET*****

CHEMICAL NAME: Tungsten Mill Products and Parts

TRADE NAME AND SYNONYMS: All Saturn Industries, Inc. Tungsten, Grade Sparkaloy W and all other Tungsten Grades that we purchase from other Tungsten Suppliers that fall in the RWMA classification of Class 13.

CHEMICAL FAMILY: Refractory Metal FORMULA: W

PHYSICAL DATA

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| 1. APPEARANCE AND ODOR: | Gray Metal - No Odor |
| 2. BOILING POINT: | 5660 C |
| 3. VAPOR PRESSURE: | N/A |
| 4. VAPOR DENSITY: | N/A |
| 5. SOLUBILITY IN WATER: | Insoluble |
| 6. SPECIFIC GRAVITY: | 19 |
| 7. PERCENT VOLATILE BY VOLUME: | 0 |
| 8. EVAPORATION RATE: | N/A |
| 9. HOW BEST MONITORED: | Air Sample |

HAZARDOUS INGREDIENTS

<u>MATERIAL</u>	<u>PERCENT BY WEIGHT</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Tungsten	96.5-100%*	---	5mg/M3

* Note: 3RW Grade Wire contains 3.1/3.4% Rhenium

HEALTH HAZARD DATA

ROUTES OF EXPOSURE:

Dust, mist and/or fumes generated during physical or metallurgical treatment may be inhaled, swallowed or come in contact with the skin or eyes.

EFFECTS OF OVEREXPOSURE:

Dust, mist and fumes generated during physical or metallurgical treatment may cause mild irritation of the nose and throat. With the exception of two Russian studies that found early signs of pulmonary fibrosis in some workers exposed to tungsten trioxide, tungsten metal and tungsten carbide, most studies have shown tungsten to be toxicologically inert. Skin and eye contact may cause irritation due to abrasive action of the dust. Current scientific evidence indicates no adverse effects are likely from accidental ingestion of small amounts of tungsten.

EMERGENCY AND FIRST AID PROCEDURES

Inhalation- If any symptoms of pulmonary involvement develop, remove from exposure and seek medical attention.
Skin Contact- If irritation occurs, thoroughly wash affected area with mild soap and water and prevent further contact. If irritation persists, seek medical attention.
Eye Contact- If irritation occurs, flush with copious amounts of water. If irritation persists, seek medical attention.
Ingestion- If substantial quantities of dusts are swallowed, dilute with a large amount of water, induce vomiting and seek medical attention.

CARCINOGENIC ASSESSMENT (NTP ANNUAL REPORT, IARC MONAGRAPHS, OTHER):
This material has not been identified as a known or suspected carcinogen by NTP, IARC or OSHA.

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: N/A TEST METHOD USED:--FLAMMABLE LIMITS: N/A--UEL:--

Tungsten Rod, Wire and fabricated products are not a fire hazard. Fine dust generated during grinding operations may ignite if allowed to accumulate and subjected to an ignition source.

EXTINGUISHING MEDIA:

Cover burning material with an inert powder, such as dry sand or limestone, to exclude oxygen.

SPECIAL FIRE FIGHTING PROCEDURES:

For a powder fire confined to a small area, use a respirator approved for toxic dusts and fumes. For a large fire involving this material, firefighters should use self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

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.

SPECIAL PROCAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Maintain good housekeeping procedures to prevent accumulation of dust. Use clean-up methods which minimize dust generation such as vacuuming or wet clean-up. If airborne dust is generated, use an appropriate NIOSH approved respirator.

OTHER PRECAUTIONS:

Wash thoroughly after handling and before eating or smoking and at the end of the work shift. Do not shake clothing or other items to remove dust. Use a vacuum. Avoid dust inhalation and direct skin contact.

SATURN INDUSTRIES, INC.
Katherine Werner, President

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