MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION
A. L. M. T. Corp.
1-11-11, Shiba, Minato-ku, Tokyo, 105-0014 JAPAN
TEL: +81-3-5418-1805 FAX: +81-3-5418-1811
TRADE NAME: Tungsten wire, Tungsten rod, Tungsten sheet

SECTION 2 HAZARDS IDENTIFICATION
Dust, mist and fumes generated during mechanical working may cause irritation of nose, throat, and eyes.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS
COMPONENT: Tungsten
CAS NUMBER: 7440-33-7
PERCENTAGE: 99.95 wt% - 100 wt%

SECTION 4 FIRST AID MEASURES
INHALATION: Remove from exposure area to fresh air immediately.
Get medical attention if breathing is difficult.

SKIN CONTACT: Wash with large amounts of water and mild soap.

EYE CONTACT: Wash eyes immediately with large amounts of water.
Get medical attention immediately.

INGESTION: Get medical attention immediately.

SECTION 5 FIRE FIGHTING MEASURES
Not considered to be a fire hazard since the bulk solid does not burn.

EXTINGUISHING MEDIA: Dry chemical, water spray, carbonic acid gas.

Special fire fighting procedures: For dry chemical to a small area, use respirator approved for toxic dusts and fumes, for large fire, firefighters should use self-contained breathing apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES
Shut off ignition sources. For small spills, place material into clean dry container.
Clean up using wet dust mop or wet clean up.

SECTION 7 HANDLING AND STORAGE
Keep away from heat, sparks, and open flame, incompatible materials.
Keep on cold and dry place.
SECTION 8  EXPOSURE CONTROLS/PERSOAL PROTECTION
USA (ACGIH): TWA 5mg/m³ (STEL) (15min.) 10mg/m³

VENTILATION
Provide local exhaust ventilation to meet published exposure limits.

EYE PROTECTION
Wear safety goggles to prevent eye contact with this substance during grinding or cutting.

PROTECTIVE CLOTHING
Protective clothing not required, but recommended.

PROTECTIVE GLOVES
Protective gloves not required but recommended.

RESPIRATOR
Protective an appropriate respirator required during grinding or cutting.

SECTION 9  PHYSICAL AND CHEMICAL PROPERTIES
Description: Solid
Odor: None
Color: Silver-gray or metallic luster
Melting Point: 3410°C ± 10°C
Vapor Pressure: $1.33 \times 10^{-6}$ Pa (2,067°C)
Boiling Point: 5900°C
Specific Gravity: 17.5–19.3
Solubility in Water: Insoluble
pH: Not applicable
Viscosity: Not applicable

SECTION 10  STABILITY AND REACTIVITY
Reactivity: Stable under normal temperatures and pressure.
Oxidized above 400°C. WO₃ oxide is formed at 700°C.
Condition to avoid: Keep away from heat, sparks, and open flame, incompatible materials.

SECTION 11  TOXICOLOGICAL INFORMATION
INHALATION
Acute Exposure: Inhilation of dust may cause irritation
Chronic Exposure: No data available

SKIN CONTACT
Acute Exposure: No data available
Chronic Exposure: No data available

EYE CONTACT
Acute Exposure: May cause irritation
Chronic Exposure: No data available
INGESTION
Acute Exposure: No data available
Chronic Exposure: May cause lack of appetite and diarrhea.
Acute toxicity: LD₅₀ intraperitoneally rat 5 mg/kg.
Irritation on the skin rabbit: 500mg/24 hours (mild)
Irritation on the eye rabbit: 500mg/24 hours (mild)

SECTION 1.2 ECOLOGICAL INFORMATION
Environmental impact rating: No data available
Acute aquatic toxicity: No data available

SECTION 1.3 DISPOSAL CONSIDERATIONS
Observe all your country's law and local regulations when disposing of this substance. May be sold as scrap for reclaim.

SECTION 1.4 TRANSPORT INFORMATION
UN Classification/UN No.: Not applicable

SECTION 1.5 REGULATORY INFORMATION
Observe all your country's law and local regulations.

SECTION 1.6 OTHER INFORMATION
Health and safety precaution in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulation.
No warranty is made, either express or implied.