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MSDS Number: M 1000700

CHEMICAL NAME: Tungsten Metal Powder M0002

Tungsten Metal Powder M0002 TUNGSTEN METAL POWDER

Manufacturer: OSRAM Sylvania Inc.
Chemical and Metallurgical Division
Towanda, PA 18848
Telephone: 570-268-5000

Emergency Phone Numbers:
570-268-5000 24/7
CHEMTREC 800-424-9300

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: TUNGSTEN METAL POWDER
TRADE NAME: C AND M SERIES TUNGSTEN METAL POWDER

MANUFACTURER: OSRAM SYLVANIA INC.
CHEMICAL AND METALLURGICAL DIV.
TOWANDA, PA 18848
TELEPHONE: 570-268-5000

EMERGENCY TELEPHONE NUMBERS
570-268-5000 24 HOURS EVERYDAY
CHEMTREC 800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

MATERIAL	CAS	PERCENT BY WEIGHT	EXPOSURE LIMIT (TWA) OSHA PEL	ACGIH TLV
TUNGSTEN	7440-33-7	100*	-----	5 MG/M3

NOTE: THIS MATERIAL IS NORMALLY SOLD AS PURE TUNGSTEN. HOWEVER, SPECIAL DOPANTS MAY BE INCORPORATED INTO POWDERS ACCORDING TO SPECIFIC CUSTOMER REQUEST.

3. HAZARDS IDENTIFICATION

APPEARANCE/ODOR: DARK GRAY ODORLESS POWDER

ROUTES OF EXPOSURE: THIS MATERIAL MAY BE INHALED, SWALLOWED, OR COME IN CONTACT WITH THE SKIN OR EYES.

POTENTIAL HEALTH EFFECTS:

INHALATION: DUST MAY BE IRRITATING TO NOSE, THROAT, AND RESPIRATORY TRACT.

EYE CONTACT: DUST PARTICLES MAY CAUSE EYE IRRITATION.

SKIN CONTACT: PROLONGED OR REPEATED CONTACT MAY CAUSE SKIN IRRITATION.

INGESTION: NO ADVERSE EFFECTS ARE LIKELY FROM THE ACCIDENTAL INGESTION OF

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SMALL AMOUNTS OF THIS MATERIAL.

CARCINOGENIC ASSESSMENT (NTP, IARC, OTHER):
THIS MATERIAL HAS NOT BEEN CLASSIFIED AS A KNOWN OR SUSPECTED CARCINOGEN.

4. FIRST AID MEASURES

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 ARE SWALLOWED, INDUCE VOMITING (IF PERSON IS CONSCIOUS) AS DIRECTED BY MEDICAL PERSONNEL.

5. FIRE FIGHTING MEASURES

FLASH POINT: N/A TEST METHOD USED: N/A

FLAMMABLE LIMITS: N/A LEL: N/A UEL: N/A

GENERAL HAZARD:

DUST MAY PRESENT A FIRE AND/OR EXPLOSION HAZARD UNDER FAVORING CONDITIONS OF PARTICLE SIZE, TEMPERATURE, AND STRONG IGNITION SOURCE.

FIRE FIGHTING INSTRUCTIONS:

USE A CLASS D DRY POWDER EXTINGUISHER OR COVER BURNING MATERIAL WITH AN INERT POWDER, SUCH AS DRY SAND OR DOLOMITE, TO SMOTHER FIRE.

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 FIRE FIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE EQUIPMENT (BUNKER GEAR).

6. ACCIDENTAL RELEASE MEASURES

VENTILATE AREA OF SPILL. CLEAN UP USING METHODS WHICH AVOID DUST GENERATION SUCH AS VACUUMING (VACUUM SHOULD BE EQUIPPED WITH A FILTER TO PREVENT RESUSPENSION OF DUST), OR WET CLEAN-UP. IF AIRBORNE DUST IS GENERATED, AN

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APPROPRIATE NIOSH APPROVED RESPIRATOR SHOULD BE WORN.

7. HANDLING AND STORAGE

HANDLING: AVOID BREATHING DUST AND PROLONGED SKIN CONTACT. 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. USE 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 TO LEVELS AT OR ABOVE THE TLV, USE AN APPROPRIATE NIOSH APPROVED RESPIRATOR.

STORAGE: KEEP CONTAINERS TIGHTLY CLOSED WHEN NOT IN USE. KEEP AWAY FROM SPARKS. STORE AWAY FROM INCOMPATIBLE MATERIALS.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROL:

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 BELOW.

RESPIRATORY PROTECTION:

A NIOSH APPROVED RESPIRATOR SHOULD BE WORN WHEN AIRBORNE DUST LEVELS EXCEED THE TLV. THE RESPIRATOR CHOSEN SHOULD HAVE A PROTECTION FACTOR APPROPRIATE FOR THE LEVEL OF EXPOSURE. UNDER NORMAL CIRCUMSTANCES, AN AIR-PURIFYING RESPIRATOR WITH DUST/FUME CARTRIDGES SHOULD BE ADEQUATE. UNDER EXTREME EXPOSURE CONDITIONS WHERE CONCENTRATIONS MAY BE ABOVE THE PROTECTION FACTOR OF AN AIR-PURIFYING RESPIRATOR, USE A POSITIVE-PRESSURE, AIR-SUPPLIED RESPIRATOR. APPROPRIATE STANDARDS FOR USE OF RESPIRATORY PROTECTION (SUCH AS 29 CFR 1910.134) SHOULD BE CONSULTED.

SKIN PROTECTION:

PROTECTIVE CLOTHING AND GLOVES ARE RECOMMENDED IF PROLONGED OR REPEATED CONTACT IS LIKELY.

EYE PROTECTION:

SAFETY GLASSES OR GOGGLES ARE RECOMMENDED.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: DARK GRAY POWDER ODOR: NONE

BOILING POINT: 5660 C SPECIFIC GRAVITY (H2O=1): 19.3

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VAPOR PRESSURE (MM HG): N/A PERCENT VOLATILE BY VOLUME: 0
VAPOR DENSITY (AIR=1): N/A EVAPORATION RATE: N/A
SOLUBILITY IN WATER: INSOLUBLE

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID/INCOMPATIBILITY: AVOID CONTACT WITH STRONG OXIDIZERS AND STRONG ACIDS.

HAZARDOUS DECOMPOSITION PRODUCTS: NONE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

11. TOXICOLOGICAL INFORMATION

STUDIES HAVE SHOWN PURE TUNGSTEN TO BE TOXICOLOGICALLY INERT. HOWEVER, PROLONGED OVEREXPOSURE TO MIXTURES OF TUNGSTEN CARBIDE AND OTHER METALS, SUCH AS COBALT, MAY LEAD TO TEMPORARY AND/OR PERMANENT RESPIRATORY INJURY.

12. ECOLOGICAL INFORMATION

NONE AVAILABLE AT THIS TIME.

13. DISPOSAL INFORMATION

WHEN POSSIBLE, WASTE CONTAINING THIS MATERIAL SHOULD BE SEGREGATED AND SENT TO A METALS RECYCLER FOR RECOVERY. WASTE MATERIAL THAT CANNOT BE RECLAIMED MUST BE DISPOSED OF IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.

14. TRANSPORT INFORMATION

M37 GRADES AND BELOW ARE CLASSIFIED AS DIVISION 4.1 READILY COMBUSTIBLE SOLIDS.

METAL POWDER, FLAMMABLE, N.O.S. (Tungsten)

CLASS - 4.1 PG III UN# UN3089

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15. REGULATORY INFORMATION

TUNGSTEN IS LISTED ON THE FOLLOWING NATIONAL INVENTORIES/LISTS:

US EPA TSCA CHEMICAL SUBSTANCES INVENTORY
CANADIAN DOMESTIC SUBSTANCES INVENTORY
CANADIAN WHMIS INGREDIENT LIST
EUROPEAN INVENTORY OF EXISTING CHEMICAL SUBSTANCES
(#231-143-9)
KOREAN EXISTING CHEMICALS LISTS (1-1231)

CERCLA REPORTABLE QUANTITY: NONE

SARA TITLE II (SUPERFUND AMENDMENTS REAUTHORIZATION ACT):
SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES: NONE
SECTION 311/312 HAZARD CATEGORY: IMMEDIATE HEALTH HAZARD
FIRE (M37 AND BELOW)
SECTION 313 TOXIC CHEMICALS: NONE

16. OTHER INFORMATION

REVISION SUMMARY 08-04-2003
PREVIOUS DATE: 09/23/2002

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