

58996

Hypertherm

Thoriated Tungsten, Grades 1th and 2th

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: Thoriated Tungsten, Grades 1th and 2th

Manufacturer Name: Osram Sylvania, Inc.

Address:

Chemical and Metallurgical Products
Hawes Street
Towanda, PA 18848-0504

Business Phone: (570)-268-5000

Business Fax: (570)-268-5157

For information in North America, call: (570)-268-5000

Manufacturer MSDS Revision Date: 04-08-99

SUPERSEDES : 08-13-98

Trade Names:

THORIATED TUNGSTEN, GRADES 1ST AND 2TH.

Synonyms:

THORIATED TUNGSTEN, GRADES 1ST AND 2TH.

Chemical Family: REFRACTORY METAL.

Chemical Formula: W WITH 1 OR 2% THO2.

Distributor Name: Hypertherm

Distributor Address:

P.O.Box 5010
Hanover, N.H. 03862
U.S.A

Distributor Telephone: 603-643-3441

CHEMICAL NAME : TUNGSTEN-THORIA MILL PRODUCTS AND PARTS.

TOP

SECTION 2: COMPOSITION, INFORMATION ON INGREDIENTS

| Chemical Name | CAS# | % Weight | |
|--|-----------|-----------|--|
| TUNGSTEN (LIMITS ARE FOR INSOLUBLE COMPOUNDS AS W) | 7440-33-7 | 98 OR 99% | |

ACGIH TLV TWA: 5 MG/M3

| Chemical Name | CAS# | % Weight | |
|-----------------|-----------|----------|--|
| THORIUM DIOXIDE | 1314-20-1 | 1 OR 2% | |

OSHA PEL TWA: *

ACGIH TLV TWA: *

Other Exposure Guidelines:

* : LIMITS FOR THORIUM DIOXIDE HAVE NOT BEEN ESTABLISHED BY THE ACGIH. ALL APPLICABLE REQUIREMENTS FOR RADIOACTIVE MATERIALS, INCLUDING EXPOSURE LIMITS, CONTAINED IN 29 CFR 1910.96 (OSHA) AND 10 CFR PARTS 20 &40 (NRC) SHOULD BE MET.

TOP

SECTION 3: HAZARDS IDENTIFICATION

Applies to All Ingredients:

Route 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.

Potential Health Effects:

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. THORIUM DIOXIDE IS A NATURAL OCCURRING RADIOACTIVE ELEMENT. IT IS AN ALPHA EMITTER AND SUCH, ITS PRIMARY HAZARD LIES IN INHALATION. NORMAL HANDLING OF THIS MATERIAL IS NOT EXPECTED TO RESULT IN ANY SIGNIFICANT EXTERNAL RADIATION EXPOSURE. CONSIDERABLE EXPERIENCE IN REFINING AND USE OF THORIUM HAS NOT REVEALED ANY ADVERSE EFFECTS FROM INDUSTRIAL EXPOSURE.

Carcinogenicity:

CARCINOGENIC ASSESSMENT (NTP ANNUAL REPORT, IARC MONOGRAPHS, OTHER): THORIUM DIOXIDE HAS BEEN IDENTIFIED AS A CARCINOGEN BY THE NTP AND IARC. EVIDENCE FOR ITS ABILITY TO CAUSE CANCER HAS COME SOLELY FROM ITS INTERNAL MEDICAL USE.

10P

SECTION 4: FIRST AID MEASURES

Eye Contact:

IF IRRITATION OCCURS, FLUSH WITH COPIOUS AMOUNTS OF WATER. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION.

Skin Contact:

IF IRRITATION OCCURS, THOROUGHLY WASH AFFECTED AREA WITH MILD SOAP AND WATER AND PREVENT FURTHER CONTACT. IRRITATION PERSISTS, SEEK MEDICAL ATTENTION.

Inhalation:

IF ANY SYMPTOMS OF PULMONARY INVOLVEMENT DEVELOP, REMOVE FROM EXPOSURE AND SEEK MEDICAL ATTENTION.

Ingestion:

IF SUBSTANTIAL QUANTITIES ARE SWALLOWED, GIVE PERSON (IF CONSCIOUS) A LARGE QUANTITY OF WATER TO DRINK, INDUCE VOMITING AND SEEK MEDICAL ATTENTION.

APPLICABLE FOR DUST, MIST AND FUMES.

10P

SECTION 5: FIRE FIGHTING MEASURES

Fire

FLAMMABLE LIMITS : NOT APPLICABLE.

Flash Point:

NOT APPLICABLE.

Extinguishing Media:

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.
COVER BURNING MATERIAL WITH AN INERT POWDER, SUCH AS DRY SAND OR LIMESTONE, TO EXCLUDE OXYGEN.

Fire Fighting Instructions:

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 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.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Spill Cleanup Measures:

APPLICABLE FOR GRINDING DUST. VENTILATE AREA OF SPILL. 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

Handling

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.

Hygiene Practices:

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. NUCLEAR REGULATORY COMMISSION REGULATIONS, CONTAINED IN TITLE 10 OF THE CODE OF FEDERAL REGULATION, SHOULD BE CONSULTED FOR APPLICABLE REQUIREMENTS PERTAINING TO THE USE OF TUNGSTEN-THORIA ALLOYS.

SECTION 8 : EXPOSURE CONTROLS, PERSONAL PROTECTION

Ventilation System

USE LOCAL EXHAUST VENTILATION WHICH IS ADEQUATE TO LIMIT PERSONAL EXPOSURE TO LEVELS WHICH DO NOT EXCEED THE TLV FOR TUNGSTEN OR APPROPRIATE LIMIT FOR THORIUM. IF SUCH EQUIPMENT IS NOT AVAILABLE, USE RESPIRATORS AS SPECIFIED BELOW.

Hand Protection Description:

PROTECTIVE GLOVES : GLOVES ARE RECOMMENDED WHEN CONTACT IS LIKELY.

Eye/Face Protection

SAFETY GLASSES OR GOGGLES ARE RECOMMENDED.

Respiratory Protection:

USE AN APPROPRIATE NIOSH APPROVED RESPIRATOR IF AIRBORNE DUST OR FUME CONCENTRATIONS EXCEED THE TLV FOR TUNGSTEN OR APPROPRIATE LIMIT FOR THORIUM. ALL APPROPRIATE REQUIREMENTS SET FORTH IN 29CFR 1910.134 SHOULD BE MET.

Other Protective

NOT APPLICABLE.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

Physical State/Appearance:

METAL

Color

GRAY.

Odor

NO ODOR.

Vapor Pressure

(MM HG): NOT APPLICABLE.

Vapor Density

(AIR=1) : NOT APPLICABLE.

Boiling Point

5660 DEG C.

Solubility

IN WATER : INSOLUBLE.

Specific Gravity

(H₂O=1) : 19

Evaporation Point

NOT APPLICABLE.

Percent Volatile

BY VOLUME : 0

Flashpoint

NOT APPLICABLE

HOW BEST MONITORED : AIR SAMPLE.

SECTION 10 : STABILITY AND REACTIVITY

Chemical Stability

STABLE.

Conditions to Avoid

NOT APPLICABLE.

Incompatibilities with Other Materials:

(MATERIALS TO AVOID) : AVOID CONTACT OF DUST WITH OXIDIZERS, ACIDS AND FLUORINE GAS

Hazardous Polymerization:

WILL NOT OCCUR.

CONDITIONS TO AVOID : NOT APPLICABLE.

Hazardous Decomposition Products:

NONE

SECTION 11 : TOXICOLOGICAL INFORMATION

Applies to All Ingredients:

Acute Health Effects

Tungsten thoria alloy solids do not constitute an important health hazard. Exposure is related chiefly to any dust created. The feeding of 2, 5 and 10% of diet as tungsten metal over a period of 70 days has shown no marked effect upon the growth of rats, as measured in terms of weight gain. Heavy exposure to the dust or the ingestion of large amounts of the soluble compounds produces changes in body weight, behavior, blood cells, etc. in experimental animals. Thoriated tungsten solids do not constitute an important radiological health hazard. However, radiological health hazards may exist if the material is present in a form that may be inhaled or ingested. Electric Shock Can Kill See Safety in Welding and Cutting, OSHA requirements in 29 CFR 19.10 and ANSI Z49.1 for addition information on welding and safety precautions.

SECTION 12 : ECOLOGICAL INFORMATION

Ecotoxicity

No information available.

SECTION 13 : DISPOSAL CONSIDERATIONS

Waste Disposal

DISPOSE OF IN ACCORDANCE WITH APPROPRIATE GOVERNMENT REGULATIONS. MAY BE SOLD AS SCRAP FOR RECLAIM.

SECTION 14 : TRANSPORT INFORMATION

DOT UN Number

No data

DOT Hazard Class: No Data.

SECTION 15 : REGULATORY INFORMATION

THORIUM DIOXIDE -

IRCA 8(b) Inventory Status

Listed

-ARA

THIS MATERIALS IS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND RE-AUTHORIZATION ACT OF 1986 AND 40 CFR PART 372

Risk Phrases

R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed. (Dust and Fumes)

Safety Phrase

S23 Do not breathe dust or fumes

SECTION 16 : ADDITIONAL INFORMATION

MSDS Revision Date

04-08-99

SUPERSEDES 08-13-98

Disclaimer

ALTHOUGH OSRAM SYLVANIA PRODUCTS INC. HAS ATTEMPTED TO PROVIDE CURRENT AND ACCURATE INFORMATION HEREIN, OSRAM SYLVANIA PRODUCTS INC. MAKES NO REPRESENTATIONS REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION AND ASSUMES NO LIABILITY FOR ANY LOSS, DAMAGE, INJURY OF ANY KIND WHICH MAY RESULT FROM OR ARISE OUT OF THE USE OF OR RELIANCE ON THE INFORMATION BY ANY PERSON.

IN CASE OF QUESTIONS, PLEASE CALL :
OSRAM SYLVANIA PRODUCTS INC.
INDUSTRIAL HYGIENIST, 570-268-5000

ABBREVIATIONS
NA : Not Applicable.

Copyright© 1996-2003 Actio Software Corporation. All Rights Reserved