



**ALDON CORPORATION**

# MATERIAL SAFETY DATA SHEET

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MSDS No. TT 290  
Effective Date May 24, 1999

## SECTION V HEALTH HAZARD DATA

TT 290

**Threshold Limited Value** Tungsten, insoluble compounds: TWA: 5 mg/m<sup>3</sup> STEL: 10 mg/m<sup>3</sup>  
ACGIH 1992-93

**Effects of Overexposure** May be harmful by inhalation or ingestion. May cause irritation. To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards.

**Emergency and First Aid Procedures**

**EYES:** Do not rub eyes. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention. **SKIN:** Flush with water. Get medical attention if irritation persists. **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. **INGESTION:** If swallowed, if conscious, give one or two glasses of water to drink and call physician immediately. Never give anything by mouth to an unconscious person.

## SECTION VI REACTIVITY DATA

|                  |                 |   |                            |   |
|------------------|-----------------|---|----------------------------|---|
| <b>Stability</b> | <b>Unstable</b> |   | <b>Conditions to Avoid</b> | Stable in dry air at ordinary temperatures, forms the trioxide at red heat. |
|                  | <b>Stable</b>   | X |                            |   |

**Incompatibility (Materials to Avoid)** Not attacked by water, but oxidized to the dioxide by steam. Attacked by fluorine at room temperature; by chlorine at 250-300°C. Acides, oxidizers.

**Hazardous Decomposition Products** None known.

|                                 |                       |                            |                 |
|---------------------------------|-----------------------|----------------------------|-----------------|
| <b>Hazardous Polymerization</b> |                       | <b>Conditions to Avoid</b> | Not applicable. |
| <b>May Occur</b>                | <b>Will Not Occur</b> |                            |                 |
|                                 | X                     |                            |                 |

## SECTION VII SPILL OR LEAK PROCEDURES

**Steps to be taken in case material is released or spilled** Wear suitable protective clothing and avoid making dust. Sweep up and place in an appropriately marked container for disposal or reclamation. Recover for use if possible-valuable metal.

**Waste Disposal Method** Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only.

This metal can be disposed of in a landfill but this metal may have scrap value on your local market and this should be investigated before disposing of potentially valuable material.

## SECTION VIII SPECIAL PROTECTION INFORMATION

**Respiration Protection (Specify Type)** None needed in normal laboratory use. If dusty conditions prevail, wear a NIOSH/MSHA-approved self-contained breathing apparatus or respirator.

|                    |                             |              |                |     |
|--------------------|-----------------------------|--------------|----------------|-----|
| <b>Ventilation</b> | <b>Local Exhaust</b>        | Recommended. | <b>Special</b> | No. |
|                    | <b>Mechanical (General)</b> | Recommended. | <b>Other</b>   | No. |

|                          |         |                       |                          |
|--------------------------|---------|-----------------------|--------------------------|
| <b>Protective Gloves</b> | Rubber. | <b>Eye Protection</b> | Chemical safety glasses. |
|--------------------------|---------|-----------------------|--------------------------|

**Other Protective Equipment** Chemical goggles, lab coat, apron, safety showers, eye wash station, proper gloves, fire extinguisher.

## SECTION IX SPECIAL PRECAUTIONS

**Precautions to be Taken in Handling & Storing** Store away from potential fire hazards. Wash thoroughly after handling.

Keep container tightly closed when not in use.

**Other Precautions** Read label on container before using. Do not wear contact lenses when working with chemicals.

Avoid inhalation of dust. Use with adequate ventilation. Remove and wash contaminated clothing.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

|                       |                     |                                 |                                       |
|-----------------------|---------------------|---------------------------------|---------------------------------------|
| <b>Revision</b> No. 2 | <b>Date</b> 5/24/99 | <b>Approved</b> Michael Raszeja | <b>Chemical Safety Coordinator</b> MR |
|-----------------------|---------------------|---------------------------------|---------------------------------------|

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## SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

|                          |                         |  |
|--------------------------|-------------------------|--|
| <b>Product</b>           | TUNGSTEN                | <br><b>CHEMTREC</b><br><b>800-424-9300</b><br>Day 716-226-6177<br><br><b>NFPA HAZARD RATING</b><br>LEAST SLIGHT MODERATE HIGH EXTREME<br>0 1 2 3 4<br><br><b>HMIS *</b><br>HEALTH FIRE REACTIVITY<br>1 2 0 |
| <b>Chemical Synonyms</b> | Tungsten metal, Wolfram |  |
| <b>Formula</b>           | W                       |  |
| <b>Unit Size</b>         | up to 2.5 Kg.           |  |
| <b>C.A.S. No.</b>        | 7440-33-7               |  |

## SECTION II INGREDIENTS OF MIXTURES

| Principal Component(s)  | %    | TLV Units      |
|---|------|----------------|
| Tungsten  | 100% | See Section V. |
| <b>WARNING! MODERATE FIRE HAZARD IN THE FORM OF DUST WHEN EXPOSED TO FLAME.</b> |      |                |

## SECTION III PHYSICAL DATA

|                        |   |   |      |
|------------------------|---|---|------|
| Melting Point (°F)     | 3410°C (6170°F)                                   | Specific Gravity (H <sub>2</sub> O = 1) | 19.3 |
| Boiling Point (°F)     | 5660°C (10220°F)                                  | Percent Volatile by Volume (%)          | N/A  |
| Vapor Pressure (mm Hg) | N/A   | Evaporation Rate ( =1)                  | N/A  |
| Vapor Density (Air=1)  | Data not available.                               |   |      |
| Solubility in Water    | Insoluble.  |   |      |
| Appearance & Odor      | Steel-gray to tin-white metallic powder; no odor. |   |      |

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

|                                  |   |  |       |              |              |
|----------------------------------|---|--|-------|--------------|--------------|
| <b>Flash Point (Method Used)</b> | Not determined. *   | <b>Flammable Limits in Air % by Volume</b> | See * | <b>Lower</b> | <b>Upper</b> |
| <b>Extinguisher Media</b>        | Do not use water. Use powdered graphite, dolomite, sodium chloride. |  |       |              |              |

### SPECIAL FIREFIGHTING PROCEDURES

In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and eye protection, if not supplied.

### UNUSUAL FIRE AND EXPLOSION HAZARDS

Dangerous in dispersed form when exposed to flame or sparks or by chemical reaction with oxidizers. Many powdered metals can ignite spontaneously and explode when suspended in air.

D.O.T. **NON REGULATED.**

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20