

SAFETY DATA SHEET

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SECTION 1 PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: **Tungsten (VI) Oxide**

PRODUCT NUMBER: 3736

CAS NUMBER: 1314-35-8

SYNONYMS: Tungsten trioxide, Tungstic anhydride, Tungsten blue, Tungsten trioxide, tungstic oxide, woframite.

MANUFACTURER:

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SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION OF SUBSTANCE OR MIXTURE

Acute toxicity; oral swallowed — Category – 4

Pictogram



Signal Word **Warning**

Hazard Statements

H302	Harmful if swallowed.

Precautionary Phrases

P264	Wash thoroughly after handling.
P270	Do not eat, drink, or smoke when using this product.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.
P330	Rinse mouth.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Formula: WO_3

Molecular Weight: 231.85

CHEMICAL NAME	CAS#	%	ACGIH(TWA)	OSHA (PEL)
Tungsten (VI) oxide	1314-35-8	100	5 mg/m3 (as W-insoluble)	No data

SECTION 4 FIRST AID MEASURES

EYE EXPOSURE: Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.
SKIN EXPOSURE: Wash affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.
INHALATION: Remove victim to fresh air. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases, seek immediate medical assistance.
INGESTION: Seek medical assistance immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

SECTION 5 FIREFIGHTING MEASURES

FLASH POINT: Product is not flammable.
AUTO IGNITION TEMPERATURE: Not applicable
EXPLOSION LIMITS: Not applicable
EXTINGUISHING MEDIUM: Use firefighting measures that suit the surrounding fire.
SPECIAL FIRE FIGHTING PROCEDURES: If involved in a fire, fire fighters should be equipped with a NIOSH approved positive self-contained breathing apparatus, flame and chemical resistant clothing, hats, boots, and gloves.
HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS: Tungsten oxide fume.

SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Wear approved personal protective equipment. Avoid dust formation. Avoid breathing dust, vapors, mist, or gas. Ensure adequate ventilation.
ENVIRONMENTAL PRECAUTIONS: Do not allow product to reach sewage system or any water course.
METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Small spills can be mixed with vermiculite or sodium carbonate and swept up.

SECTION 7 HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Wear personal protective equipment. Provide appropriate exhaust ventilation at places where dust is formed.
CONDITIONS FOR SAFE STORAGE: Store material in a tightly sealed container in a cool, dry, and well-ventilated area.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

EXPOSURE CONTROLS:

Component	Exposure Limits	Basis	Entity
Tungsten Oxide	3 mg/m^3	TLV	ACGIH
	5 mg/m^3	TWA	NIOSH
	10 mg/m^3	STEL	NIOSH

EYE PROTECTION: The dust may cause slight to mild irritation of the eyes. Always wear approved safety glasses with side shields, safety goggles, or face shield when handling a chemical substance in the laboratory.
SKIN PROTECTION: The dust may cause slight to mild irritation of the skin. Chemical resistant gloves.
VENTILATION: Handle in an efficient chemical fume hood.
RESPIRATOR: If in form of fine dust and ventilation is not available a respirator should be worn. The use of respirators requires a Respirator Protection Program to be in OSHA 29 CFR 19-10.134 compliance.
INHALATION: Harmful if swallowed. Hazard association with inhalation of fine dust or fume. May be irritating to nasal cavity and respiratory tract.
INGESTION: May be harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting, and diarrhea.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

COLOR AND FORM: Yellowish-green solid
MOLECULAR WEIGHT: 231.85
BOILING POINT: 1837° C
MELTING POINT: 1473° C

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

SPECIFIC GRAVITY: 7.16
VAPOR PRESSURE: No data
SOLUBILITY IN WATER: Insoluble

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Air and moisture stable
HAZARDOUS POLYMERIZATION: No hazardous polymerization
CONDITIONS TO AVOID: None
INCOMPATIBILITY: Strong acids,
DECOMPOSITION PRODUCTS: Tungsten oxide fume.

SECTION 11 TOXICOLOGICAL DATA

ACUTE TOXICITY: LD50 Oral – Rat – male and female- >2000 mg/kg. LC50 Inhalation – Rat – male and female – 4h - > 5.36 mg/l.
CARCINOGENIC EFFECTS: No components of this product present at levels greater than or equal to 0.1% is identified as a confirmed carcinogen by IARC, ACGIH, NTP, and OSHA.
MUTAGENIC EFFECTS: Not available
TETRATOGENIC EFFECTS: No data available
RTECS: YO7760000 = The chemical, physical, and toxicological properties have not been thoroughly investigated.

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

SECTION 12 ECOLOGICAL DATA

TOXICITY TO MICROORGNISMS: EC50 (Sludge Treatment): > 10,000 mg/l Exposure time: 3 h Test Type: Respiration inhibition Method: OECD Test Guideline 209 GLP: yes

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in according to local, state, and federal regulations.

SECTION 14 TRANSPORTATION DATA

Non-hazardous material

SECTION 15 REGULATORY INFORMATION

TSCA: Listed in the TSCA inventory
SARA 313 COMPONENTS: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 302 COMPONENTS: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 311/312 HAZARDS: Chronic Health Hazard
MASSACHUSETTS RIGHT TO KNOW COMPONENTS: No components are subject to the Massachusetts Right To Know Act.
CALIFORNIA PROP. 65 COMPONENTS: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16 OTHER INFORMATION

HMIS CLASSIFICATION:
Health: 1 Flammability: 0 Reactivity: 1
NFPA RATING:
Health: 1 Fire: 0 Reactivity Hazard: 1

CAS #: Chemical Abstracts Service Number
ACGIH: American Conference of Governmental Industrial Hygienists
TWA: Time-Weighted Average
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
mg/m3: milligrams per cubic meter
NIOSH: National Institute for Occupational Safety and Health
TLV: Threshold Limit Value; Recommended airborne concentration limit set by ACGIH.
STEL: Short-Term Exposure Limit: 15-minute exposure concentration that should not be exceeded.
LD50: Lethal Dose, 50%
LC50: Lethal Concentration, 50%.
mg/l: milligrams per liter
IARC: International Agency for Research on Cancer
NTP: National Toxicology Program.
RTECS: Registry of Toxic Effects of Chemical Substances
GLP: Good Laboratory Practice
OECD: The Organization for Economic Co-operation and Development
TSCA: Toxic Substances Control Act
SARA: Superfund Amendments and Reauthorization Act
GLP: Good Laboratory Practice
OECD: The Organization for Economic Co-operation and Development

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DATE PREVIOUSLY REVISED: 10/14
DATE REVISED: 07/26
REVISION SUMMARY: Fax number removed. Updated the following Section # 8 – Added Exposure Controls. All other details in the document about the product remain unchanged. Revised by EHS 7/26
Reviewed/Approved 6/26 –

EHS / SDS DEPT.