

Material Safety Data Sheet

Tungsten (VI) Anhydride

Section 1 - Chemical Product and Company Identification

MSDS Name: Tungsten Anhydride

Catalog Numbers: AEB-1013

Synonyms: Tungsten trioxide, Tungstic oxide, Tungstic acid, Tungsten oxide, Tungsten (VI) Oxide

Company Identification:

Alpha Resources, Inc

3090 Johnson Road

Stevensville, MI 49127

For information, call: 269-465-5559

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

| CAS# | Chemical Name | Percent | EINECS/ELINCS |
|-----------|---------------|---------|---------------|
| 1314-35-8 | oxide | 100.0 | 215-231-4 |

Hazard Symbols: None listed.

Risk Phrases: None listed.

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: yellow. **Caution!** May cause eye and skin irritation. May cause respiratory and digestive tract irritation. May be harmful if swallowed.

Target Organs: None.

Potential Health Effects

Eye: May cause eye irritation.

Skin: May cause skin irritation.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May be harmful if swallowed.

Inhalation: May cause respiratory tract irritation.

Chronic: Prolonged or repeated skin contact may cause dermatitis. May cause lung damage.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: Never give anything by mouth to an unconscious person. Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically

Antidote: None reported.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

Extinguishing Media: Use water fog, dry chemical, carbon dioxide, or regular foam.

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use only in a well-ventilated area. Minimize dust generation and accumulation. Keep container tightly closed.

Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Keep containers tightly closed.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

| Chemical Name | ACGIH | NIOSH | OSHA - Final PELs |
|----------------|-------|-------------|-------------------|
| Tungstic oxide | ted | none listed | none listed |

OSHA Vacated PELs: Tungstic oxide: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to minimize contact with skin.

Respirators: Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: yellow

Odor: odorless

pH: Not available.

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate:Not applicable.

Viscosity: Not available.

Boiling Point: Not applicable.

Freezing/Melting Point:1473 deg C

Autoignition Temperature: None Reported

Flash Point: None Reported

Decomposition Temperature:Not available.

NFPA Rating: (estimated) Health: 1; Flammability: 0; Reactivity: 0

Explosion Limits, Lower:None Reported

Upper: None Reported

Solubility: Insoluble in water

Specific Gravity/Density:7.1600

Molecular Formula:O3 W

Molecular Weight:231.86

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Incompatible materials, dust generation.
Incompatibilities with Other Materials: Chlorine, Chlorine trifluoride, Lithium.
Hazardous Decomposition Products: None.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:
CAS# 1314-35-8: YO7760000
LD50/LC50:
CAS# 1314-35-8:
Oral, rat: LD50 = 1059 mg/kg; <BR.

Carcinogenicity:
CAS# 1314-35-8: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Epidemiology: No information available.
Teratogenicity: No information available.
Reproductive Effects: No information available.
Neurotoxicity: No information available.
Mutagenicity: No information available.
Other Studies: No data available.

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.
Environmental: No information found.
Physical: No information found.
Other: No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

| | US DOT | IATA | RID/ADR | IMO | Canada TD |
|-----------------------|-----------------------|------|---------|-----|-----------------------|
| Shipping Name: | Information available | | | | Information available |
| Hazard Class: | | | | | |
| UN Number: | | | | | |
| Packing Group: | | | | | |

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 1314-35-8 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA

Section 302 (RQ)

None of the chemicals in this material have an RQ.

Section 302 (TPQ)

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 1314-35-8: acute, chronic.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 1314-35-8 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

Not available.

Risk Phrases:**Safety Phrases:****WGK (Water Danger/Protection)**

CAS# 1314-35-8: 1

Canada

CAS# 1314-35-8 is listed on Canada's DSL List. CAS# 1314-35-8 is listed on Canada's DSL List.

This product has a WHMIS classification of D2B.

CAS# 1314-35-8 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 1314-35-8: OEL-AUSTRALIA: TWA 5 mg(W)/m³; STEL 10 mg(W)/m³ OEL-BELGIUM: TWA 5 mg(W)/m³; STEL 10 mg(W)/m³ OEL-DENMARK: TWA 5 mg(W)/m³ OEL-FINLAND: TWA 5 mg(W)/m³ OEL-THE NETHERLANDS: TWA 5 mg(W)/m³ OEL-THE PHILIPPINES: TWA 1 mg(W)/m³ OEL-SWEDEN: TWA 5 mg(W)/m³ OEL-SWITZERLAND: TWA 5 mg(W)/m³ OEL-UNITED KINGDOM: TWA 5 mg(W)/m³; STEL 10 mg(W)/m³ OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

Section 16 - Additional Information

MSDS Creation Date: 5/03/1999

Revision #1 Date: 8/02/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Alpha be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Alphar has been advised of the possibility of such damages.