

GHS Safety Data Sheet

SDS No. : WWI01PAEG

Date Issued : 2006/04/18

Last updated 2023/7/19

Section 1. Identification of the substance or mixture and of the supplier

Product Information

Product name: W(CO)₆ Tungsten carbonyl

| Product | Purity | Form | Size or Shape |
|---------|--------|--------------------|---------------|
| WWI12XB | — | crystalline powder | — |

Company Information:

Manufacturer : Kojundo Chemical Laboratory Co., Ltd.
 1-28, 5-chome, Chiyoda, Sakado-shi, Saitama Japan 350-0284
 Phone: +81-49-284-1511 Fax: +81-49-284-1351
 Emergency Phone : +81-49-284-1511

Recommended uses and restrictions on use: For research purposes

Section 2. Hazards identification

GHS Classification

| Health Hazards | Environmental Hazards | Physical Hazards |
|---|-----------------------|-------------------|
| Acute toxicity(oral) : Category 3 Acute toxicity(dermal) : Category 3 Acute toxicity(inhalation) : Category 3 | No data available | No data available |

GHS Label: T

Pictograms or symbols:



Warning word: DANGER

| Hazard information | Description of precaution |
|--|--|
| Toxic if swallowed Toxic in contact with skin Toxic if inhaled | Wear protective gloves/protective clothing/eye protection/respiratory protection /face protection during handling. Avoid breathing dust/mist/gas/fume/vapors/spray. Do not eat, drink or smoke when using this product, and wash hands thoroughly after handling. Take off the contaminated clothing and wash before reuse. Use only outdoors or in well ventilated area. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. IF ON SKIN: Remove immediately all contaminated clothing and rinse skin with water/shower. Then wash skin with plenty of soap and water. If skin irritation occurs, get medical advice/attention. Immediately call a POISON CENTER or doctor/physician. Protect from sunlight. Store in a cool, dry and well ventilated place. Keep container tightly closed. Store locked up. Dispose of contents/ container in accordance with local/national regulations. |

Section 3. Composition / information on ingredients

Chemical or common name: Hexacarbonyl tungsten
 Synonyms: Tungsten carbonyl
 Chemical formula: W(CO)₆



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| | |
|-------------------------------|------------------|
| Single Substance or Compound: | Single substance |
| Composition: | 100% |
| CAS #: | 14040-11-0 |
| RTECS#: | Not listed |
| TSCA inventory : | Listed |
| EINECS: | 2378802 |

Section 4. First aid measures

| | |
|---------------|---|
| Eye contact: | Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention. |
| Skin contact: | Promptly flush contaminated skin with soap or mild detergent and water. Contact physician if irritation continues. |
| Inhalation: | Remove the exposed person immediately and provide fresh air. Get medical attention. |
| Ingestion: | Rinse mouth and throat with water. Get medical attention immediately. |

Section 5. Fire fighting measures

| | |
|----------------------|---|
| Extinguishing media: | Dry sand, Perlite, Metal fire extinguishers. DO NOT use water fog or foam, carbon dioxide. |
| Fire fighting: | Flammable material. Remove containers to safe place if possible. Self-contained breathing apparatus and full protective clothing should be used, if the material is involved in fire. |

Section 6. Accidental release measures

| | |
|---|--|
| Personal Precautions: | Workers should use protective wears to prevent contact with the spilt adhesive and inhalation of its vapor/dusts. |
| Environmental hazard precautions: | Shut off leak if without risk. Prevent flow out to river, etc. so as not to badly affect. |
| Method for containment and cleaning up: | Wear respirator, chemical safety goggles, rubber boots and heavy rubber gloves. Wear disposable coveralls and discard them after use. Remove all sources of ignition. Avoid unnecessary contacts with spills. Indoor leakage: Ventilate as much as possible until the cleaning is completed. Outdoor leakage: Work from the windward and evacuate the leeward crowd. Absorb or cover with vermiculite or other suitable absorbent, and dispose of DOT approved waste containers as much as possible. Carefully wash spill site with plenty of water after material pick up. |

Section 7. Handling and storage

Precautions to be taken in handling:

| | |
|----------------|---|
| Safe handling: | Use protective wears and local ventilation equipment, if inhalation or skin contact is foreseen. Avoid prolonged or repeated exposure. Air and moisture sensitive. Light sensitive. |
|----------------|---|



Keep away from heat, sparks and naked flame.

Electrically ground all equipment when handling this material and use only

Non sparking tools.

Precautions to be taken in storage:

General precautions: Store the material in a sealed container.

Store in a cool, dry, well ventilated and dark place away from incompatible materials.

Keep away from any heat, sparks, and flames.

Section 8. Exposure controls / personal protection

| Exposure guideline: | Chemical Name | ACGIH(2023) TLV-TWA mg/m ³ | OSHA(2006) PEL-TWA mg/m ³ |
|---------------------|--------------------------|---|--|
| | Tungsten compounds(as W) | 3(R) | — |

R:respirable particles

Facility measures: Local ventilation of closed work room or total proper ventilation to prevent inhalation.

Protective ware: Wear appropriate NIOSH/MSHA-approved respirator, safety goggles, impervious gloves, protective wear, protective boots etc.

Section 9. Physical and chemical properties

Appearance: Colorless crystalline powder

Chemical formula: W(CO)₆

Formula weight: 351.9

Melting point: ~150 °C

Boiling point: Decomposes, sublimes

Density: 2.65 g/cm³

Solubility: In water; Insoluble

Slightly soluble in ; benzene , ethanol , ether

Flammability: Combustible substance

Oxidation: None

Section10. Stability and reactivity

Stability: Stable in closed container under room temperature.

Light sensitive material in air

Reactivity:

Incompatibility: Nitric acid, fuming and strong oxidizing agents.

Condition to avoid: Heat , ignition source

Section11. Toxicological information

| | |
|----------------------------------|--|
| Acute toxicity(Oral): | GHS :Category 3 ; Toxic if swallowed |
| Acute toxicity(Inhalation): | GHS :Category 3 ; Toxic in contact with skin |
| Skin corrosive / irritation: | GHS :Category 3 ; Toxic if inhaled |
| Serious eye damage / irritation: | GHS : No data available |
| Respiratory sensitization: | GHS : No data available |
| Skin sensitization: | GHS : No data available |
| Germ cell mutagenicity: | GHS : No data available |
| Carcinogenicity: | GHS : No data available |
| Reproductive toxicity: | GHS : No data available |
| Specific target organ toxicity | |



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— single exposure: GHS : No data available
— repeated exposure: GHS : No data available
Aspiration hazard: GHS : No data available

Section 12. Ecological information

Ecotoxicity:

Hazardous to the aquatic environment

— acute toxicity: GHS : No data available

— chronic toxicity: GHS : No data available

Hazardous to the ozone layer: GHS : No data available

No Freon or Halon

Fish toxicity: No data available

Degradability: No data available

Bioaccumulative potential: No data available

Mobility in soil: No data available

Section 13. Disposal considerations

Disposal method: User of the product should contract with the local government or licensed 'Industrial Waste Haulers' for disposal of waste.

Section 14. Transport information

UN number: 3466

IATA shipping name: Metal carbonyls, solid, n.o.s.

IATA hazard class: Class 6.1 (Toxic substances)

IATA packing group: III

HS code: 2931.90

Marine pollution: None

Section 15. Regulatory information

TSCA inventory: listed.

Please refer to any other local / national measures that may be relevant.

Section 16. Other information

This SDS is for provision of information, and it does not represent a guarantee the properties or safeties of the product.

The information herein is based on the references we could obtained and the present state of our knowledge, however, this SDS does not always cover all information about the product. Some new information or amendments may be added afterwards.

Prior to use, please investigate the laws and regulations of the organization, area and country where the product is to be used. The information is intended to ordinary usage, in case of special handling, sufficient care should be taken.



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