福建沃尔法化学科技有限公司
Fujian Wolfa Chemical Technology Co., Ltd

DESIGN REPORT OF SAFETY DATA SHEET

Revision Date: Aug. 14, 2025

Name of the sample	TUNGSTEN HEXACARBONYL
Applicant	Fujian Wolfa Chemical Technology Co., Ltd.
Supplier	Fujian Wolfa Chemical Technology Co., Ltd.
Composition of the sample	TUNGSTEN HEXACARBONYL: ≥99%
Warranty of design	GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS) Eleventh revised edition
Design Result of SDS please see next page.	

Notes: This SDS is valid before the implementation of the Twelfth revised edition GHS.

SAFETY DATA SHEET

SDS

Section 1 Product and Company Identification

> Product Identifier

Product Name	TUNGSTEN HEXACARBONYL
Synonyms	——
CAS No.	14040-11-0
EC No.	237-880-2
Molecular Formula	C_6O_6W

> Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Relevant Identified Uses	Please consult manufacturer.
Uses Advised Against	Please consult manufacturer.

> Details of the Supplier of the Safety Data Sheet

Applicant Name	Fujian Wolfa Chemical Technology Co., Ltd.
Application Address	Room 2620, Building 18, Xingguang Plaza, No.970 Anji South Road, Fengze District, Quanzhou City, Fujian Province
Applicant Post Code	362000
Applicant Telephone	+86-17854166533
Applicant Fax	——
Applicant E-mail	——
Supplier Name	Fujian Wolfa Chemical Technology Co., Ltd.
Supplier Address	Room 2620, Building 18, Xingguang Plaza, No.970 Anji South Road, Fengze District, Quanzhou City, Fujian Province
Supplier Post Code	362000
Supplier Telephone	+86-17854166533
Supplier Fax	——
Supplier E-mail	——

> Emergency Phone Number

Emergency Phone Number	+86-17854166533

Section 2 Hazards Identification

Hazard class and label elements of the product according to GHS (the Eleventh revised edition):

> GHS Hazard Class

Acute Toxicity – Inhalation	Category 3,H331
Acute Toxicity – Oral	Category 3,H301

Acute Toxicity –Dermal	Category 3,H311

For the full text of the H-Statements mentioned in this Section, see Section 16.

> GHS Label Elements

Pictogram



Signal Word	Danger

> Hazard Statements

H331+H301+H311	Toxic if swallowed, in contact with skin or if inhaled

> Precautionary Statements

Prevention

P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264	Wash your face, hands, and any skin that comes into contact with it thoroughly after work
P270	Do not eat, drink, or smoke when using this product
P271	Use only outdoors or in a well-ventilated area
P280	Wear protective gloves/clothing/goggles/masks

Response

P301+P310+P330	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.
P302+P312+P352	IF ON SKIN: Wash with plenty of soap and water. Call a POISONCENTER or doctor/ physician if you feel unwell.
P304+P340+P311	IF INHALED: Remove victim to fresh air and keep at rest in a positioncomfortable for breathing. Call a POISON CENTER or doctor/ physician.
P361+P364	Remove all contaminated clothing immediately and wash it before reusing

Storage

P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

Disposal

P501	Dispose of contents/container in accordance with local/regional/national/ international regulations.

Section 3 Composition/Information on Ingredients

Component	CAS No.	EC No.	Concentration

			(weight percent, %)
TUNGSTEN HEXACARBONYL	14040-11-0	237-880-2	≥99

Section 4 First Aid Measures

> Description of First Aid Measures

General Advice	Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.
Eye Contact	Flush eyes with water as a precaution.
Skin Contact	Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
If swallowed	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
If inhalation	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

> Most Important Symptoms and Effects, both Acute and Delayed

The most important known symptom and effects are described in the labelling(see section 2) and/or in section 11

> Indication of Any Immediate Medical Attention and Special Treatment Needed

No data available.

Section 5 Fire Fighting Measures

> Extinguishing Media

Suitable Extinguishing Media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

> Specific Hazards Arising from the Substance or Mixture

Carbon oxides, Tungsten oxide.

> Advice for Firefighters

Firefighters must wear a self-contained breathing apparatus and full-body firefighting suits while fighting fires upwind.

Try to move containers from the fire scene to an open area.

If containers in the fire scene have changed color or emit sound from safety relief devices, evacuation must be carried out immediately.

Isolate the accident site and prohibit unauthorized personnel from entering.

Contain and handle firefighting water to prevent environmental pollution.

Section 6 Accidental Release Measure

> Personal Precautions, Protective Equipment and Emergency Procedures

1 It is recommended that emergency response personnel wear self-contained breathing apparatus, anti-static clothing, and rubber oil-resistant gloves.

2 Do not touch or cross over the leaked material.

3 All equipment used during operations should be grounded.

4 Cut off the leak source if possible and eliminate all ignition sources.

5 Define a restricted area based on the affected zone of liquid flow, steam, or dust dispersion. Unrelated personnel should evacuate to a safe area upwind or crosswind.

> Environmental Precautions

1 Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

> Methods and Materials for Containment and Cleaning Up

1 Small leaks: Collect the leaked liquid in a sealed container if possible. Absorb it with sand, activated carbon, or other inert materials, and transfer it to a safe location. Do not flush it into drains.

2 Large leaks: Build a dike or dig a pit to contain the leak. Seal off drainage pipes. Cover with foam to suppress evaporation. Use an explosion-proof pump to transfer it to a tanker or dedicated collector for recycling or disposal at a waste treatment facility.

Section 7 Handling and Storage

> Precautions for Handling

1 Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

> Conditions for safe storage, including any incompatibilities

1 Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

Section 8 Exposure Controls/Personal Protection

> Control Parameters

Occupational Exposure Limit Values

No information available

Biological Limit Values

No information available

> Engineering Controls

1 Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice.

2 Set up emergency exit and necessary risk-elimination area.

> Personal Protection Equipment

Eye/face protection	Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).
Skin protection	Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Respiratory protection	If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

Section 9 Physical and Chemical Properties

Appearance	White solid
Odor	No information available
Odor Threshold	No information available
pH	No information available
Melting Point/Freezing Point (℃)	150 ℃ (lit.)
Initial Boiling Point and Boiling Range (℃)	No information available
Flash Point (℃)	200 ℃
Evaporation Rate	No information available
Flammability	No information available
Upper/lower explosive limits[%(v/v)]	Upper limit：No information available; Lower limit：No information available
Vapor Pressure (KPa)	1.2 mmHg (67 ℃)
Relative Vapour Density(Air=1)	No information available
Relative Density(Water=1)	2.65 g/cm^3 (25 ℃)
Solubility	Insoluble in water
n-Octanol/Water Partition Coefficient	No information available
Auto-Ignition Temperature (℃)	No information available
Decomposition Temperature (℃)	No information available
Kinematic Viscosity (mm^2/s)	No information available
Particle characteristics	No information available
Critical Temperature (℃)	No information available

Section 10 Stability and Reactivity

Reactivity	No information available.
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	No information available
Conditions to Avoid	No information available
Incompatible Materials	No information available

Hazardous decomposition Products	Other decomposition products - No data available In the event of fire: see section 5.

Section 11 Toxicological Information

> Acute Toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

> Skin Corrosion/Irritation

No information available

> Serious Eye Damage/Irritation

No information available

> Respiratory or skin Sensitization

No information available

> Germ Cell Mutagenicity

No information available

> Carcinogenicity

No information available

> Reproductive Toxicity

No information available

> Specific target organ toxicity -single exposure

No information available

> Specific target organ toxicity -repeated exposure

No information available

> Aspiration hazard

No information available

> Additional Information

RTECS: Not available

Carbonyl compounds are toxic due to decomposition yielding carbon monoxide., To the best of our knowledge, thechemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12 Ecological Information

> Acute Aquatic Toxicity

No information available

> Chronic aquatic toxicity

No information available

> Others

Persistence and degradability	No information available.

Bioaccumulative potential	No information available.
Mobility in soil	No information available.
Results of PBT and vPvB assessment	No information available.

Section 13 Disposal Considerations

> Waste treatment methods

Waste Chemicals	The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.
Contaminated Packaging	Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.
Recommendations	Before disposal, refer to relevant national and local regulations. Safety precautions for disposal personnel are outlined in Section 8.

Section 14 Transport Information

Transporting Label	
Marine pollutant	No
UN Number	3466
UN Proper Shipping Name	METAL CARBONYLS,SOLID,N.O.S.
Transport Hazard Class	6.1
Transport Subsidiary Hazard Class	NONE
Packing Group	III

Section15 Regulatory Information

Regulatory Information

Component	EINECS	TSCA	DSL	IECSC	NZIoC	PICCS	KECL	AIIC	ENCS
TUNGSTEN HEXACARBONYL	√	√	×	√	√	×	√	√	×

【EINECS】 European Inventory of Existing Commercial Chemical Substances

【TSCA】 Toxic Substances Control Act Inventory (United States)

【DSL】	Domestic Substances List (Canada)
【IECSC】	Inventory of Existing Chemical Substances in China
【NZIoC】	New Zealand Inventory of Chemicals
【PICCS】	New Zealand Inventory of Chemicals
【KECL】	Korean Existing Chemicals List
【AIIC】	Australian Inventory of Industrial Chemicals
【ENCS】	Existing and New Chemical Substances (Japan)

Note

"√" Indicates that the substance included in the regulations

"×" That no data or included in the regulations

Section 16 Additional Information

Preparation Date Dec.1, 2022

Revision Date Aug.14, 2025

Revision Reason SDS Update Section

Disclaimer

The information provided in this Safety Data Sheet is correct based on the latest knowledge, information and concepts available to us. The information provided is intended only as a guide for safe operation, use, processing, storage, transportation, disposal and discharge and is not intended as a guarantee or specification of quality. This information is only used for the specific substance specified and may not be suitable for mixing with any other substance or in all cases, unless otherwise specified in the context.