

Creation Date 09-Oct-2009

Revision Date 30-Jan-2024

Revision Number 3

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

|                           |                        |
|---------------------------|------------------------|
| Product Description:      | <u>Tungsten powder</u> |
| Cat No. :                 | <b>39749</b>           |
| CAS No                    | 7440-33-7              |
| EC No                     | 231-143-9              |
| Molecular Formula         | W                      |
| REACH registration number | -                      |

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

|                      |                          |
|----------------------|--------------------------|
| Recommended Use      | Laboratory chemicals.    |
| Uses advised against | No Information available |

### 1.3. Details of the supplier of the safety data sheet

|         |  |
|---------|--|
| Company | Avocado Research Chemicals Ltd.<br>(Part of Thermo Fisher Scientific)<br>Shore Road, Heysham<br>Lancashire, LA3 2XY,<br>United Kingdom<br>Office Tel: +44 (0) 1524 850506<br>Office Fax: +44 (0) 1524 850608 |
|---------|--|

|                |                                |
|----------------|--------------------------------|
| E-mail address | begel.sdsdesk@thermofisher.com |
|----------------|--------------------------------|

### 1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

#### CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

#### Physical hazards

Flammable solids

Category 2 (H228)

#### Health hazards

Based on available data, the classification criteria are not met

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## Environmental hazards

Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16

## 2.2. Label elements



Signal Word

Warning

## Hazard Statements

H228 - Flammable solid

## Precautionary Statements

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

## 2.3. Other hazards

In accordance with Annex XIII of the REACH Regulation, inorganic substances do not require assessment

This product does not contain any known or suspected endocrine disruptors

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances

| Component | CAS No    | EC No             | Weight % | CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567 |
|-----------|-----------|-------------------|----------|---|
| Tungsten  | 7440-33-7 | EEC No. 231-143-9 | >95      | Flam. Sol. 2 (H228)   |

REACH registration number

-

Full text of Hazard Statements: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Get medical attention

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immediately if symptoms occur.

## Ingestion

Do NOT induce vomiting. Get medical attention.

## Inhalation

Remove to fresh air. Get medical attention immediately if symptoms occur. If not breathing, give artificial respiration.

## Self-Protection of the First Aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

### 4.2. Most important symptoms and effects, both acute and delayed

No information available.

### 4.3. Indication of any immediate medical attention and special treatment needed

#### Notes to Physician

Treat symptomatically.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

#### Suitable Extinguishing Media

Water mist may be used to cool closed containers.

#### Extinguishing media which must not be used for safety reasons

No information available.

### 5.2. Special hazards arising from the substance or mixture

Flammable. Containers may explode when heated. Dust can form an explosive mixture with air.

#### Hazardous Combustion Products

None under normal use conditions.

### 5.3. Advice for firefighters

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

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Avoid dust formation. Remove all sources of ignition. Take precautionary measures against static discharges.

### 6.2. Environmental precautions

Should not be released into the environment. See Section 12 for additional Ecological Information.

### 6.3. Methods and material for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

### 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

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## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation. Avoid dust formation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges.

### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

### 7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Flammables area. Keep away from heat, sparks and flame.

**Technical Rules for Hazardous Substances (TRGS) 510** Class 4.1B  
**Storage Class (LGK) (Germany)**

### 7.3. Specific end use(s)

Use in laboratories

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### Exposure limits

List source(s): **UK** - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020. **IRE** - 2021 Code of Practice for the Chemical Agents Regulations, Schedule 1. Published by the Health and Safety Authority

| Component | The United Kingdom   | European Union | Ireland   |
|-----------|--|----------------|---|
| Tungsten  | STEL: 10 mg/m <sup>3</sup> 15 min<br>TWA: 5 mg/m <sup>3</sup> 8 hr |                | TWA: 5 mg/m <sup>3</sup> 8 hr. metal W<br>STEL: 10 mg/m <sup>3</sup> 15 min |

#### Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

#### Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

| Component                   | Acute effects local (Dermal) | Acute effects systemic (Dermal) | Chronic effects local (Dermal) | Chronic effects systemic (Dermal) |
|-----------------------------|------------------------------|---------------------------------|--------------------------------|-----------------------------------|
| Tungsten<br>7440-33-7 (>95) |                              |                                 |                                | DNEL = 1.7mg/kg<br>bw/day         |

| Component                   | Acute effects local (Inhalation) | Acute effects systemic (Inhalation) | Chronic effects local (Inhalation) | Chronic effects systemic (Inhalation) |
|-----------------------------|----------------------------------|-------------------------------------|------------------------------------|---------------------------------------|
| Tungsten<br>7440-33-7 (>95) |                                  |                                     |                                    | DNEL = 5.8mg/m <sup>3</sup>           |

#### Predicted No Effect Concentration (PNEC)

See values below.



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|  |                          |  |
|--|--------------------------|--|
| <b>Flammability (liquid)</b>                   | Not applicable           | Solid                                    |
| <b>Flammability (solid,gas)</b>                | No information available |  |
| <b>Explosion Limits</b>                        | No data available        |  |
| <b>Flash Point</b>                             | No information available | <b>Method -</b> No information available |
| <b>Autoignition Temperature</b>                | No data available        |  |
| <b>Decomposition Temperature</b>               | No data available        |  |
| <b>pH</b>                                      | No information available |  |
| <b>Viscosity</b>                               | Not applicable           | Solid                                    |
| <b>Water Solubility</b>                        | Insoluble                |  |
| <b>Solubility in other solvents</b>            | No information available |  |
| <b>Partition Coefficient (n-octanol/water)</b> |                          |  |
| <b>Vapor Pressure</b>                          | No data available        |  |
| <b>Density / Specific Gravity</b>              | No data available        |  |
| <b>Bulk Density</b>                            | No data available        |  |
| <b>Vapor Density</b>                           | Not applicable           | Solid                                    |
| <b>Particle characteristics</b>                | No data available        |  |

## 9.2. Other information

|                          |  |
|--------------------------|--|
| <b>Molecular Formula</b> | W  |
| <b>Molecular Weight</b>  | 183.85   |
| <b>Flammable solids</b>  | Burning rate or burning time = > 5 minutes and <= 10 minutes |
| <b>Evaporation Rate</b>  | Not applicable - Solid                                       |

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

None known, based on information available

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

**Hazardous Polymerization** Hazardous polymerization does not occur.  
**Hazardous Reactions** None under normal processing.

### 10.4. Conditions to avoid

Incompatible products. Excess heat. Avoid dust formation. Keep away from open flames, hot surfaces and sources of ignition.

### 10.5. Incompatible materials

Strong oxidizing agents. Alcohols. Halogens.

### 10.6. Hazardous decomposition products

None under normal use conditions.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

|                            |   |
|----------------------------|---|
| <b>Product Information</b> | No acute toxicity information is available for this product |
| <b>(a) acute toxicity;</b> |   |
| <b>Oral</b>                | No data available   |
| <b>Dermal</b>              | No data available   |
| <b>Inhalation</b>          | No data available   |

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| Component | LD50 Oral | LD50 Dermal               | LC50 Inhalation |
|-----------|-----------|---------------------------|-----------------|
| Tungsten  | -         | LD50 > 2000 mg/kg ( Rat ) | -               |

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;  
Respiratory No data available  
Skin No data available

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available  
There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available  
Target Organs No information available.

(j) aspiration hazard; Not applicable  
Solid

Other Adverse Effects The toxicological properties have not been fully investigated.

Symptoms / effects,both acute and delayed No information available.

## 11.2. Information on other hazards

**Endocrine Disrupting Properties** Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

**Ecotoxicity effects** Do not empty into drains. .

### 12.2. Persistence and degradability

**Persistence** Insoluble in water.  
**Degradability** Not relevant for inorganic substances.

**12.3. Bioaccumulative potential** May have some potential to bioaccumulate

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|   |  |
|---|--|
| <b>12.4. Mobility in soil</b>   | Spillage unlikely to penetrate soil. Is not likely mobile in the environment due its low water solubility.                       |
| <b>12.5. Results of PBT and vPvB assessment</b>   | In accordance with Annex XIII of the REACH Regulation, inorganic substances do not require assessment.                           |
| <b>12.6. Endocrine disrupting properties</b><br><b>Endocrine Disruptor Information</b>                        | This product does not contain any known or suspected endocrine disruptors  |
| <b>12.7. Other adverse effects</b><br><b>Persistent Organic Pollutant</b><br><b>Ozone Depletion Potential</b> | This product does not contain any known or suspected substance<br>This product does not contain any known or suspected substance |

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

|  |  |
|--|--|
| <b>Waste from Residues/Unused Products</b> | Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.   |
| <b>Contaminated Packaging</b>              | Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition. |
| <b>European Waste Catalogue (EWC)</b>      | According to the European Waste Catalog, Waste Codes are not product specific, but application specific.   |
| <b>Other Information</b>                   | Waste codes should be assigned by the user based on the application for which the product was used. Do not flush to sewer. Can be landfilled or incinerated, when in compliance with local regulations.                                  |

## SECTION 14: TRANSPORT INFORMATION

### IMDG/IMO

|   |                                 |
|---|---------------------------------|
| <b>14.1. UN number</b>                  | UN3089                          |
| <b>14.2. UN proper shipping name</b>    | Metal powder, flammable, n.o.s. |
| <b>14.3. Transport hazard class(es)</b> | 4.1                             |
| <b>14.4. Packing group</b>              | III                             |

### ADR

|   |                                 |
|---|---------------------------------|
| <b>14.1. UN number</b>                  | UN3089                          |
| <b>14.2. UN proper shipping name</b>    | Metal powder, flammable, n.o.s. |
| <b>14.3. Transport hazard class(es)</b> | 4.1                             |
| <b>14.4. Packing group</b>              | III                             |

### IATA

|   |                                 |
|---|---------------------------------|
| <b>14.1. UN number</b>                  | UN3089                          |
| <b>14.2. UN proper shipping name</b>    | Metal powder, flammable, n.o.s. |
| <b>14.3. Transport hazard class(es)</b> | 4.1                             |
| <b>14.4. Packing group</b>              | III                             |



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- 14.5. Environmental hazards** No hazards identified
- 14.6. Special precautions for user** No special precautions required.
- 14.7. Maritime transport in bulk according to IMO instruments** Not applicable, packaged goods

## SECTION 15: REGULATORY INFORMATION

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

**International Inventories**

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

| Component | CAS No    | EINECS    | ELINCS | NLP | IECSC | TCSI | KECL     | ENCS | ISHL |
|-----------|-----------|-----------|--------|-----|-------|------|----------|------|------|
| Tungsten  | 7440-33-7 | 231-143-9 | -      | -   | X     | X    | KE-35000 | X    | -    |

| Component | CAS No    | TSCA | TSCA Inventory notification - Active-Inactive | DSL | NDSL | AICS | NZIoC | PICCS |
|-----------|-----------|------|---|-----|------|------|-------|-------|
| Tungsten  | 7440-33-7 | X    | ACTIVE  | X   | -    | X    | X     | X     |

**Legend:** X - Listed '-' - Not Listed      **KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

**Authorisation/Restrictions according to EU REACH** Not applicable

| Component | CAS No    | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|-----------|-----------|---|---|---|
| Tungsten  | 7440-33-7 | -   | -   | -   |

**Seveso III Directive (2012/18/EC)**

| Component | CAS No    | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements |
|-----------|-----------|---|--|
| Tungsten  | 7440-33-7 | Not applicable  | Not applicable   |

**Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals**

Not applicable

**Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?**

Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

**National Regulations**

**UK** - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

**WGK Classification** See table for values

| Component | Germany - Water Classification (AwSV) | Germany - TA-Luft Class |
|-----------|---------------------------------------|-------------------------|
| Tungsten  | nwg                                   |                         |

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## 15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

## SECTION 16: OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3

H228 - Flammable solid

### Legend

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**NOEC** - No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer Predicted No Effect Concentration (PNEC)

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

### Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** - (Volatile Organic Compound)

### Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

### Prepared By

Health, Safety and Environmental Department

### Creation Date

09-Oct-2009

### Revision Date

30-Jan-2024

### Revision Summary

New emergency telephone response service provider.

**This safety data sheet complies with Regulation UK SI 2019/758 and UK SI 2020/1577 as amended.**

### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the

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date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**