SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: Tungsten

Tungsten

<table>
<thead>
<tr>
<th>Substance name</th>
<th>tungsten</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification numbers</td>
<td></td>
</tr>
<tr>
<td>CAS no.</td>
<td>7440-33-7</td>
</tr>
<tr>
<td>EC no.</td>
<td>231-143-9</td>
</tr>
</tbody>
</table>

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

Relevant identified uses of the substance or mixture
chemical analysis
Uses advised against
No data available.

1.3 Details of the supplier of the safety data sheet

Address
ELTRA GmbH
Retsch-Allee 1-5
42781 Haan
GERMANY

Telephone no. +49 (0) 2104 23 33-400
Fax no. +49 (0) 2104 23 33-499

Information provided by / telephone
+49 (0) 2104 23 33-192

Advice on Safety Data Sheet
info@eltra.com

1.4 Emergency telephone number

For medical advice (in German and English):
+49 (0)551 192 40 (Giftinformationszentrum Nord)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification information
This product does not meet the classification and labelling criteria given in the Regulation (EC) No 1272/2008 (CLP).

2.2 Label elements

Not relevant

2.3 Other hazards

No data available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical characterization
Substance name: tungsten
Formula: W
Molecular weight: 60.08

Identification numbers
CAS no. 7440-33-7
EC no. 231-143-9

3.2 Mixtures
Not applicable. The product is not a mixture.

3.3 Other information
This product is an article in the sense of article 3 of the European Chemicals Regulation (REACH) 1907/2006/EC and therefore not subject to the labelling obligations according to the EU regulation 1272/2008 (CLP). Submission of a safety data sheet is not mandatory for articles and is done on a voluntary basis.

SECTION 4: First aid measures

4.1 Description of first aid measures
General information
In case of persisting adverse effects, consult a physician.
After inhalation
Remove affected person from the immediate area. Ensure supply of fresh air.
After skin contact
When in contact with the skin, clean with soap and water.
After eye contact
Separate eyelids, wash the eyes thoroughly with water (15 min.).
After ingestion
Get medical attention if pain still persists.

4.2 Most important symptoms and effects, both acute and delayed
No data available.

4.3 Indication of any immediate medical attention and special treatment needed
Treat symptomatically

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media
Metal fire powders; Cement; Extinguishing measures to suit surroundings.
Unsuitable extinguishing media
Water; Carbon dioxide

5.2 Special hazards arising from the substance or mixture
Combustible.

5.3 Advice for firefighters
Use self-contained breathing apparatus. Wear protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
For non-emergency personnel
Refer to protective measures listed in sections 7 and 8. Ensure adequate ventilation.
For emergency responders
No data available. Personal protective equipment (PPE) - see Section 8.

6.2 Environmental precautions
No special measures necessary.

6.3 Methods and material for containment and cleaning up
Take up mechanically. Send in suitable containers for recovery or disposal.

6.4 Reference to other sections
No data available.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Advice on safe handling
Provide exhaust ventilation if dust is formed. No special measures necessary if used correctly.

General protective and hygiene measures
Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Wash hands before breaks and after work.

Advice on protection against fire and explosion
No special measures necessary.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions
Keep container tightly closed and dry in a cool, well-ventilated place.

Requirements for storage rooms and vessels
No special measures required.

Incompatible products
None known

7.3 Specific end use(s)
No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
No parameters available for monitoring.

8.2 Exposure controls
Appropriate engineering controls
No data available.

Personal protective equipment

Respiratory protection
If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of dust formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

Eye / face protection
Safety glasses (EN 166)

Hand protection
Not necessary, if processed under regular conditions.

Other
Normal chemical work clothing.

Environmental exposure controls
No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form/Colour</td>
<td>solid grey</td>
</tr>
<tr>
<td>Odour</td>
<td>odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH value</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>appr. 5930 °C</td>
</tr>
</tbody>
</table>
Melting point / melting range

Value: 3370 °C

Decomposition point / decomposition range
No data available

Flash point
Not applicable

Auto-ignition temperature
No data available

Oxidising properties
No data available

Explosive properties
No data available

Flammability (solid, gas)
No data available

Lower flammability or explosive limits
No data available

Upper flammability or explosive limits
No data available

Vapour pressure
No data available

Vapour density
No data available

Evaporation rate
No data available

Relative density
No data available

Density
No data available

Bulk density
Value: appr. 4000 kg/m³

Solubility in water
Comments: insoluble

Solubility(ies)
No data available

Partition coefficient: n-octanol/water
No data available

Viscosity
No data available

9.2 Other information

Other information
No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available.

10.2 Chemical stability
Stable if stored and handled properly.
10.3 Possibility of hazardous reactions
No data available.

10.4 Conditions to avoid
Extreme heat

10.5 Incompatible materials
metal oxides; Halogens; Halogenous-halogen compound; Fluorides; oxidizing agents; Peroxides

10.6 Hazardous decomposition products
No data available.

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>Category</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Acute dermal toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Acute inhalational toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>No data available</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>No data available</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>No data available</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Reproduction toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>No data available</td>
</tr>
<tr>
<td>STOT - single exposure</td>
<td>No data available</td>
</tr>
<tr>
<td>STOT - repeated exposure</td>
<td>No data available</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>No data available</td>
</tr>
<tr>
<td>Symptoms related to the physical, chemical and toxicological characteristics</td>
<td>Eye contact may cause mechanical irritation through dust particles.</td>
</tr>
<tr>
<td>Delayed and immediate effects as well as chronic effects from short and long-term exposure</td>
<td>Inhalation of high concentrations may result in damage of the lungs.</td>
</tr>
</tbody>
</table>

### SECTION 12: Ecological information

#### 12.1 Toxicity

<table>
<thead>
<tr>
<th>Category</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity to fish (acute)</td>
<td>No data available</td>
</tr>
<tr>
<td>Toxicity to fish (chronic)</td>
<td>No data available</td>
</tr>
</tbody>
</table>
EC safety data sheet

Trade name: Tungsten

Current version: 3.0.1, issued: 31.01.2020
Replaced version: 3.0.0, issued: 22.08.2018
Region: GB

### 12.2 Persistence and degradability
No data available.

### 12.3 Bioaccumulative potential
No data available.

### 12.4 Mobility in soil
No data available.

### 12.5 Results of PBT and vPvB assessment
No data available.

### 12.6 Other adverse effects
No data available.

### 12.7 Other information
Do not discharge product unmonitored into the environment.
Ecological data are not available.

**SECTION 13: Disposal considerations**

13.1 Waste treatment methods

**Product**
Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

**Packaging**
Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse. Packaging that cannot be cleaned should be disposed of in agreement with the regional waste disposal company.

**SECTION 14: Transport information**

14.1 Transport ADR/RID/ADN
The product is not subject to ADR/RID/ADN regulations.

14.2 Transport IMDG
The product is not subject to IMDG regulations.

14.3 Transport ICAO-TI / IATA
The product is not subject to ICAO-TI / IATA regulations.

14.4 Other information
No data available.

14.5 Environmental hazards
Information on environmental hazards, if relevant, please see 14.1 - 14.3.

14.6 Special precautions for user
No data available.
14.7 **Transport in bulk according to Annex II of Marpol and the IBC Code**

Not relevant

**SECTION 15: Regulatory information**

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

**EU regulations**


In accordance with the Reach regulation (EC) 1907/2006, the product does not contain any substances that are considered as subject to listing in annex XIV, inventory of substances requiring authorisation.

**REACH candidate list of substances of very high concern (SVHC) for authorisation**

In accordance with article 57 and article 59 of the Reach regulation (EC) 1907/2006, this substance is not considered as subject to listing in annex XIV, inventory of substances requiring authorisation ("Authorization list").


The substance is not subject to the provisions of annex XVII (restriction entries) of the Reach regulation (EC) 1907/2006.

**Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances**

This substance is not subject to Part I or 2 of Annex I

15.2 **Chemical safety assessment**

No data available.

**SECTION 16: Other information**

**Further information**

Article no. 90220, 2.500 g

**Sources of key data used to compile the data sheet:**


National Threshold Limit Values of the corresponding countries as amended in each case.

Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding chapter.

**Department issuing safety data sheet**

UMCO GmbH
Georg-Wilhelm-Str. 187, D-21107 Hamburg
Tel.: +49 40 / 555 546 300  Fax: +49 40 / 555 546 357  e-mail: umco@umco.de

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Document protected by copyright. Alterations or reproductions require the express written permission of UMCO GmbH.

Prod-ID 640128