

TBi Industries GmbH  
35463 Fernwald-Steinbach

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

### 1.1 Product identifier

**Wolfram-Elektrode, Typen WP [grün] / WCe20 [grau] / WLa15 [gold plus] / WLa20 [blau]**

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

#### 1.2.1 Relevant uses

Electrode for welding (arc welding)

#### 1.2.2 Uses advised against

None known.

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

#### Company

TBi Industries GmbH  
Ruhberg 14  
35463 Fernwald-Steinbach / GERMANY  
Phone +49(0)6404 9171-0  
Fax +49(0)6404 9171-58  
Homepage www.tbi-industries.com  
E-mail info@tbi-industries.com

#### Address enquiries to

#### Technical information

info@tbi-industries.com

#### Safety Data Sheet

sdb@chemiebuero.de

### 1.4 Emergency telephone number

#### Company

+49(0)6404 9171-0 Mo-Fr 8:00 - 16:00

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture [REGULATION (EC) No 1272/2008]

No classification.

### 2.2 Label elements

### 2.3 Other hazards

#### Environmental hazards

Does not contain any PBT or vPvB substances.

#### Other hazards

Further hazards were not determined with the current level of knowledge.

## SECTION 3: Composition / Information on ingredients

### Product-type:

The product is an article.

Range [%]	Substance
97 - < 100	Tungsten CAS: 7440-33-7, EINECS/ELINCS: 231-14-39
0 - < 2,5	Cerium dioxide CAS: 1306-38-3, EINECS/ELINCS: 215-150-4
0 - < 2,5	Lanthanum oxide CAS: 1312-81-8, EINECS/ELINCS: 215-200-5

### Comment on component parts

No dangerous components.  
Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.

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#### SECTION 4: First aid measures

##### 4.1 Description of first aid measures

<b>General information</b>	Take off contaminated clothing and wash before reuse.
<b>Inhalation</b>	Ensure supply of fresh air. In the event of symptoms seek medical treatment.
<b>Skin contact</b>	When in contact with the skin, clean with soap and water. Consult a doctor if skin irritation persists.
<b>Eye contact</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
<b>Ingestion</b>	In the event of symptoms seek medical treatment. Rinse out mouth and give plenty of water to drink.

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

None known.

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

Treat symptomatically.

#### SECTION 5: Fire-fighting measures

##### 5.1 Extinguishing media

**Suitable extinguishing media** Water spray jet.  
Carbon dioxide.  
Dry powder.  
Foam.

**Extinguishing media that must not be used** Full water jet

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

Risk of formation of toxic pyrolysis products.

##### 5.3 Advice for firefighters

Use self-contained breathing apparatus.

Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

#### SECTION 6: Accidental release measures

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

No special measures necessary.

##### 6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

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

Take up mechanically.

Dispose of absorbed material in accordance within the regulations.

##### 6.4 Reference to other sections

See SECTION 8+13

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Provide suitable vacuuming at the processing area.

Do not eat, drink, smoke or take drugs at work.

Wash hands before breaks and after work.

Use barrier skin cream.

Take off contaminated clothing and wash before reuse.

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

Keep only in original container.

Prevent penetration into the ground.

Do not store together with food and animal food/diet.

Keep container tightly closed.

### 7.3 Specific end use(s)

See product use, SECTION 1.2

## SECTION 8: Exposure controls / personal protection

### 8.1 Control parameters

Ingredients with occupational  
exposure limits to be monitored (GB)

not applicable

### 8.2 Exposure controls

**Additional advice on system design** Ensure adequate ventilation on workstation.  
Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.

**Eye protection** safety glasses (EN 166:2001)

**Hand protection** 0,7 mm Butyl rubber, >480 min (EN 374-1/-2/-3).  
The details concerned are recommendations. Please contact the glove supplier for further information.

**Skin protection** Protective clothing (EN 340)

**Other** Avoid contact with eyes and skin.  
Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.  
Do not inhale gases.  
Do not inhale dust.

**Respiratory protection** Respiratory protection mask in the event of high concentrations.  
Short term: filter apparatus, combination filter A-P2. (DIN EN 14387)

**Thermal hazards** not applicable

**Delimitation and monitoring of the environmental exposition** Protect the environment by applying appropriate control measures to prevent or limit emissions.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Form	solid
Color	grey
Odor	odourless
Odour threshold	not applicable
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	5660 - 5900°C
Flash point [°C]	not applicable
Flammability (solid, gas) [°C]	not applicable
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	not applicable
Density [g/ml]	18,3 - 19,3
Bulk density [kg/m <sup>3</sup> ]	not applicable
Solubility in water	insoluble
Partition coefficient [n-octanol/water]	not applicable
Viscosity	not applicable
Relative vapour density determined in air	not applicable
Evaporation speed	not applicable
Melting point [°C]	3390 - 3430°C
Autoignition temperature [°C]	not self-igniting
Decomposition temperature [°C]	not applicable

### 9.2 Other information

none

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No dangerous reactions known if used as directed.

### 10.2 Chemical stability

The product is stable under standard conditions.

### 10.3 Possibility of hazardous reactions

No hazardous reactions known.

### 10.4 Conditions to avoid

See SECTION 7

### 10.5 Incompatible materials

Strong oxidizing agent.

### 10.6 Hazardous decomposition products

No hazardous decomposition products known.

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product
ATE-mix, inhalativ (dust), > 5 mg/l 4h.
ATE-mix, dermal, > 2000 mg/kg.
ATE-mix, oral, > 2000 mg/kg.
Substance
Cerium dioxide, CAS: 1306-38-3
LD50, dermal, Rat: > 2000 mg/kg.
LD50, oral, Rat: > 5000 mg/kg.
LC50, inhalative, Rat: > 5,05 mg/l 4h.

<b>Serious eye damage/irritation</b>	Does not contain a relevant substance that meets the classification criteria. Based on the available information, the classification criteria are not fulfilled. Toxicological data of complete product are not available.
<b>Skin corrosion/irritation</b>	Based on the available information, the classification criteria are not fulfilled. Does not contain a relevant substance that meets the classification criteria. Toxicological data of complete product are not available.
<b>Respiratory or skin sensitisation</b>	Does not contain a relevant substance that meets the classification criteria. Based on the available information, the classification criteria are not fulfilled. Toxicological data of complete product are not available.
<b>Specific target organ toxicity — single exposure</b>	Does not contain a relevant substance that meets the classification criteria. Based on the available information, the classification criteria are not fulfilled. Toxicological data of complete product are not available.
<b>Specific target organ toxicity — repeated exposure</b>	Does not contain a relevant substance that meets the classification criteria. Based on the available information, the classification criteria are not fulfilled. Toxicological data of complete product are not available.
<b>Mutagenicity</b>	Does not contain a relevant substance that meets the classification criteria. Based on the available information, the classification criteria are not fulfilled. Toxicological data of complete product are not available.
<b>Reproduction toxicity</b>	Does not contain a relevant substance that meets the classification criteria. Based on the available information, the classification criteria are not fulfilled. Toxicological data of complete product are not available.
<b>Carcinogenicity</b>	Does not contain a relevant substance that meets the classification criteria. Based on the available information, the classification criteria are not fulfilled. Toxicological data of complete product are not available.
<b>Aspiration hazard</b>	Does not contain a relevant substance that meets the classification criteria. Based on the available information, the classification criteria are not fulfilled.
<b>General remarks</b>	none

## SECTION 12: Ecological information

### 12.1 Toxicity

Substance
Cerium dioxide, CAS: 1306-38-3
EC50, (48h), Daphnia magna: > 1000 mg/l (OECD 202).
EC50, (72h), Danio rerio: > 200 mg/l.

### 12.2 Persistence and degradability

<b>Behaviour in environment compartments</b>	not determined
<b>Behaviour in sewage plant</b>	not applicable
<b>Biological degradability</b>	not applicable

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**12.3 Bioaccumulative potential**

not applicable

**12.4 Mobility in soil**

none

**12.5 Results of PBT and vPvB assessment**

not applicable

**12.6 Other adverse effects**

None known.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

Waste material c It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

**Product**

Coordinate disposal with the authorities if necessary.

**Waste no. (recommended)**

120113

**Contaminated packaging**

Uncontaminated packaging may be taken for recycling.

**Waste no. (recommended)**

150102

**SECTION 14: Transport information****14.1 UN number**

**Transport by land according to ADR/RID** not applicable

**Inland navigation (ADN)** not applicable

**Marine transport in accordance with IMDG** not applicable

**Air transport in accordance with IATA** not applicable

**14.2 UN proper shipping name**

**Transport by land according to ADR/RID** NO DANGEROUS GOODS

**Inland navigation (ADN)** NO DANGEROUS GOODS

**Marine transport in accordance with IMDG** NOT CLASSIFIED AS "DANGEROUS GOODS"

**Air transport in accordance with IATA** NOT CLASSIFIED AS "DANGEROUS GOODS"

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**14.3 Transport hazard class(es)**

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

**14.4 Packing group**

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

**14.5 Environmental hazards**

Transport by land according to ADR/RID no

Inland navigation (ADN) no

Marine transport in accordance with IMDG no

Air transport in accordance with IATA no

**14.6 Special precautions for user**

Relevant information under SECTION 6 to 8.

**14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code**

not applicable

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**EEC-REGULATIONS** 1991/689 (2001/118); 2010/75; 2004/42; 648/2004; 1907/2006 (REACH); 1272/2008; 75/324/EEC (2016/2037/EC); (EU) 2015/830; (EU) 2016/131; (EU) 517/2014

**TRANSPORT-REGULATIONS** ADR (2019); IMDG-Code (2019, 39. Amdt.); IATA-DGR (2019)

**NATIONAL REGULATIONS (GB):** EH40/2005 Workplace exposure limits (Second edition, published December 2011).

- Observe employment restrictions for people none

- VOC (2010/75/CE) 0 %

**15.2 Chemical safety assessment**

not applicable

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**SECTION 16: Other information****16.1 Abbreviations and acronyms:**

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route  
 RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses  
 ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure  
 ATE = acute toxicity estimate  
 CAS = Chemical Abstracts Service  
 CLP = Classification, Labelling and Packaging  
 DMEL = Derived Minimum Effect Level  
 DNEL = Derived No Effect Level  
 EC50 = Median effective concentration  
 ECB = European Chemicals Bureau  
 EEC = European Economic Community  
 EINECS = European Inventory of Existing Commercial Chemical Substances  
 ELINCS = European List of Notified Chemical Substances  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
 IATA = International Air Transport Association  
 IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk  
 IC50 = Inhibition concentration, 50%  
 IMDG = International Maritime Code for Dangerous Goods  
 IUCLID = International Uniform Chemical Information Database  
 LC50 = Lethal concentration, 50%  
 LD50 = Median lethal dose  
 LC0 = lethal concentration, 0%  
 LOAEL = lowest-observed-adverse-effect level  
 MARPOL = International Convention for the Prevention of Marine Pollution from Ships  
 NOAEL = No Observed Adverse Effect Level  
 NOEC = No Observed Effect Concentration  
 PBT = Persistent, Bioaccumulative and Toxic substance  
 PNEC = Predicted No-Effect Concentration  
 REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals  
 STP = Sewage Treatment Plant  
 TLV@TWA = Threshold limit value – time-weighted average  
 TLV@STEL = Threshold limit value – short-time exposure limit  
 VOC = Volatile Organic Compounds  
 vPvB = very Persistent and very Bioaccumulative

**16.2 Other information**

Classification procedure

Modified position

none



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