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1.- IDENTIFICATION OF PRODUCT AND COMPANY

1.1 Product identification: **WT20 TUNGSTEN ELECTRODE**

1.2 Identified pertinent uses of the substance or mixture and uses that are advised against: Arc welding

Classification(s):
EN ISO 6848 W Th20

1.3 Supplier's details:

Chaves Bilbao S.L.,
C/Bizkargi, 6 Pol. Ind. Sarrikola
E-48195 LARRABETZU Bizkaia
Tel. +34 94 412 34 56
www.chavesbao.com

1.4 Emergency telephone number:

Toxicology Information Service
Telephone: Spain: **+34 91 562 04 20** (24/7/365)
Other: [National support - Poison Centres \(europa.eu\)](http://national.support-poison.centres.europa.eu)

2.- IDENTIFICATION OF HAZARDS

2.1 Product classification: 1A carcinogenic, H350i (can cause cancer through inhalation) according to Regulation EC No. 1272/2008

2.2 Label items:

Regulation (EC) No. 1272/2008 label




Directive 67/548/EEC label



GHS08 Hazardous to health
H: 350i Can cause cancer through inhalation
P: Precautionary advice
101 If you need medical advice, keep the packaging or label to hand.
102 Keep out of the reach of children
201 Request special instructions before use
202 Do not handle the substance before having read and understood all the safety instructions
270 Do not eat, drink or smoke during use
281 Use the obligatory personal protective equipment
308+313 In the event of evident or presumed exposure: check with a doctor
405 Keep locked away
501 Dispose of the container/recipient
T: Toxic
R Phrases: 49 Can cause cancer through inhalation
S Phrases:
1/2 Keep locked away and out of the reach of children
7 Keep the recipient tightly closed
13 Keep away from food, drink and animal feed
20/21 Do not eat, drink or smoke during use
23 Do not breathe in gas/fumes/vapour/aerosols
36/37/39 Use appropriate protective clothing: gloves and eye/face protection
45 In case of accident or discomfort, see a doctor immediately (if possible, show them the label)
60 Dispose of the product and its recipient as hazardous waste
Thorium(VI) oxide is a radioactive material the greatest danger of which is the emission of alpha radiation.

2.3 Other hazards:

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3.- COMPOSITION

3.2 Tungsten alloys:

SUBSTANCE	CAS No.	Concentration	Clas. EC 1272/2008	Clas. 67/548/EEC
Tungsten	7440-33-7	> 95%		
Thorium(IV) oxide (Th-228 and Th-232)	1214-20-1	1-4%	Canc. 1A; H350i	T; R49
Other oxides		< 5%		

4.- FIRST AID

4.1 Description of first aid

In case of accident or a feeling of discomfort, immediately seek medical advice (show the material safety data sheet if possible). Immediately improve contaminated clothing.

Inhalation Provide fresh air and keep the person warm and at rest. Request immediate medical help.

Contact with the skin Wash immediately with abundant water and soap.

Contact with the eyes Rinse immediately with abundant water for 10 to 15 minutes, holding the eyelashes back. Request medical attention if the problem persists.

Ingestion Immediately clean the mouth and drink large quantities of water. Request medical attention if the problem persists.

4.2 Main symptoms and acute and delayed effects:

No specific symptoms. Can cause cancer through inhalation.

4.3 Indication of all medical assistance and special treatments that must be provided immediately.

No special measures are required. Treat the symptoms.

5.- FIRE FIGHTING MEASURES

5.1 Extinguishing means:

The extinguishing measures must be chosen based on the surrounding area. The product is not combustible in itself. Appropriate means: pulverised water, high-power jet, carbon dioxide, foam, dry extinguishing powder.

5.2 Specific hazards arising from the substance or mixture:

Radioactive materials (alpha emitters).

5.3 Recommendations for fire fighting personnel:

Use personal respiration devices. Collect the extinguishing water separately to avoid drainage into the rainwater or surface water collection system.

6.- MEASURES IN THE EVENT OF ACCIDENTAL SPILLAGE

6.1 Personal precautions, personal protective equipment and emergency procedures:

See section 8.

6.2 Precautions in relation to the environment:


See section 13.

6.3 Methods and means of contention and cleaning:

N.A.

6.4 Reference to other sections:

See section 8/13.

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7.- HANDLING AND STORAGE

7.1 Precautions for safe handling:

Ensure that employees know the risks of intoxication. This product must only be used by people over the age of 18 who have been sufficiently informed on its hazardous nature and the need to take safety precautions.

7.2 Safe storage conditions, including possible incompatibilities:

Keep in the original container. Keep containers tightly closed. Restrict access to storage areas. Observe the permitted limits. Store away from food, drink and animal feed.

7.3 Specific end uses:

Arc welding

8.- EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Do not allow exposure above the exposure limit values:

Substance:	CAS-No.:	Source:	Occupational exposure limit:	Peak exposure limit:
Tungsten	7440-33-7	TRGS 900 (General dust limit 01/06)	3mg/m ³ A or 10mg/m ³ E	2(II)
Thorium(VI) oxide	1314-20-1	TRGS 900 (General dust limit 01/06)	3mg/m ³ A or 10mg/m ³ E	2(II)
Other oxides		TRGS 900 (General dust limit 01/06)	3mg/m ³ A or 10mg/m ³ E	2(II)

8.2 Exposure controls:

Ensure sufficient ventilation and occasional aspiration in critical areas. The technical measures and application of appropriate work methods are prioritised over the use of personal protective equipment. If a radiation dose of over 1mSv/a is foreseen, a control area must be created. Do not eat, drink or smoke in the workplace. Wash hands in breaks and upon finishing work. Apply skincare products after the work. Wash work clothing before reuse.

Personal protective equipment: Use a mask with ventilation when working or welding in reduced spaces, or where the ventilation is not sufficient to keep the exposure values within the safety limits. Use appropriate protective equipment such as a combination filter (DIN EN 141). Use certified protective gloves (DIN EN 374) and airtight protection goggles. To protect yourself from direct contact with the skin, it is essential to use additional protective clothing on top of normal work clothing. Only use appropriate, comfortable, clean clothing. Barrier creams must not be used as a substitute for protective clothing.

9.- PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance: Solid, metal

Colour: dark grey


Density: 18.3-19.3g/cm³

Melting point: 3390-3430°C

Boiling point: 5660-5900°C

9.2 Information on radioactive properties:

Radioactive materials (alpha emitters). Th-228 and Th-232 with 42.8 at 150Bq/g.

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10.- STABILITY AND REACTIVITY

10.1 Reactivity:	Does not react dangerously with other substances under normal conditions.
10.2 Chemical stability:	Stable product under normal conditions.
10.3 Possibility of dangerous reactions:	Formation of metal oxides with atmospheric oxygen.
10.4 Conditions that must be avoided:	This product is only suitable for manual welding procedures.
10.5 Incompatible materials:	Oxidising agents.
10.6 Hazardous decomposition products:	Toxic metal oxide fumes.

11.- TOXICOLOGICAL INFORMATION

11.1 Information on the toxicological effects

Acute toxicity	N.A.
Chronic toxicity	No specific symptoms observed in laboratory animals.

11.2 Irritation

Irritating effect on the skin	Non-irritating.
Irritating effect in the eyes	Non-irritating.
Irritating effect on the digestive tract	Non-irritating.
Corrosiveness	Non-corrosive.

11.3 Awareness

Awareness	N.A.
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11.4 Toxicity due to repeated doses

Toxicity	Danger of accumulative effects.
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11.5 CMR effects

Carcinogenicity	Category 1 EU (known carcinogen for humans). Priority route through the respiratory tracts. Incorporation into bones. Damage to bone marrow and periosteum.
Mutagenicity	No indication of mutation in human germ cells.
Reproductive toxicity	No indication of carcinogenicity.

12.- ECOLOGICAL INFORMATION

12.1 Ecological toxicity

Exotoxicity	N.A.
Persistence and biodegradability	The methods to determine biodegradability do not apply to inorganic substances.
Bioaccumulative potential	N.A.
Mobility in the ground	No.
PBTs and PvBs	This criterion is not applicable.
Other adverse effects	Radioactive materials (alpha emitters)

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13.- CONSIDERATIONS IN RELATION TO DISPOSAL

13.1 Methods for the treatment of waste:

Dispose of the product and its packaging according to the applicable national or regional regulations. Clean packaging must be recycled. Manage contaminated packaging in the same way as the substance.

Do not tip down drains or dispose of in aquatic environments. Do not allow to enter the soil/subsoil.

14.- INFORMATION IN RELATION TO TRANSPORT

14.1 Land transport (ADR/RID)

Name	RADIOACTIVE MATERIAL, EXCEPT PACKAGING - MADE OF NATURAL THORIUM CONTAINS TUNGSTEN ELECTRODE - THORIUM(IV) OXIDE
UN number	2909

14.2 Sea transport (IMDG)

Name	RADIOACTIVE MATERIAL, EXCEPT PACKAGING - MADE OF NATURAL THORIUM CONTAINS TUNGSTEN ELECTRODE - THORIUM(IV) OXIDE
UN number	2909

14.3 Air transport (ICAO-TI/IATA-DGR)

Name	RADIOACTIVE MATERIAL, EXCEPT PACKAGING - MADE OF NATURAL THORIUM CONTAINS TUNGSTEN ELECTRODE - THORIUM(IV) OXIDE
UN/ID-No	2909

14.4 Post

See 14.1 Land transport

15.- REGULATORY INFORMATION

15.1 Labelling

Hazardous components for labelling: Thorium(VI) oxide

Special mixture labelling: only for professional users.

15.2 Specific regulation for health, safety and environment

European Union

DIRECTIVE 1999/13/EC on the limitation of volatile organic compound emissions due to the use of organic solvents in certain activities and installations	No
REGULATION 2037/2000 on substances that deplete the ozone layer.	No
REGULATION 689/2008 on the importation and exportation of hazardous chemical products	No
REGULATION 648/2004 on detergents	No
REGULATION 1907/2006 on the registration, evaluation, authorisation and restriction of chemical substances and preparations. Restrictions of title VIII	No

16.- OTHER INFORMATION

The information on this Material Safety Data Sheet is based on the technical data held by Chaves Bilbao S.L. and which it believes to be reliable. Given that the conditions of use are out of our control, we take no responsibility in relation to the use made of this information, nor do we guarantee this in any way neither implicitly nor explicitly. In the event of the mixing or processing of the product, this information shall cease to be necessarily valid. For more information, please contact Chaves Bilbao S.L.