

1. Description of substances, preparation and company

Company: ARC Welding & Cutting GmbH & Co. KG
Friedrich-Ebert-Straße 1
36251 Bad Hersfeld
Germany
Tel. + 49 6621-79 86 400

Product identification: WT20

Colour marking: red

Product application: Tungsten electrode for TIG welding

2. Information on components

Chemical characteristics: Tungsten W with 1,8 – 2,2% Thorium oxide (ThO₂)

Hazardous substances: Minor radioactivity due to the additive of natural Thorium

3. Potential dangers

Thorium is naturally radioactive, care must be taken with respect to welding fume generated (adequate ventilation should be provided) and grinding dust caused by sharpening.

Other dangers depending on welding process.

4. First aid measures

after inhalation: In case of prolonged inhalation of welding fume the persons concerned have to be supplied with fresh air. If irritation persists contact a doctor.

after contact with the skin: N/A

after contact with the eyes: Rinse eyes thoroughly and contact a doctor

after swallowing: Contact a doctor immediately

5. Measures necessary in the case of fire

N/A

6. Measures necessary in the case of accidental emissions

N/A

7. Handling and storage

Handling: During TIG-welding, adequate ventilation and air circulation must be provided together with an exhausting device to absorb welding fume.

Storage: Store in a dry place

8. Limitation of exposure and personal protective equipment

Exposure limits: Inhalation of grinding dust must be avoided. After contact with skin clean hands immediately. To avoid or minimize radioactive radiation caused by inhalation of welding fume strictly adhere to the measures mentioned at 7.

Personal protective equipment:

Respiratory protection: not necessary when adequate ventilation is provided

Hand protection: Welding gloves

Eye protection: Welding glasses or welding

9. Physical and chemical properties

Form: bar shaped

Colour: metallic grey

Smell: scentless

Evaporating point: approx. 5.900°C

Melting point: approx. 3.400°C

Flash point: N/A

Inflammability: N/A

Ignition temperature: N/A

Explosion limits: none

Fire supporting characteristics: none

Steam pressure: N/A

Density: WT20: 18,95 – 18,86 g/cm³

Solubility in water: non soluble

Miscellaneous: none

10. Stability and reactivity

Conditions to avoid: N/A

Substances to avoid: N/A

Dangerous decomposition Products: N/A

11. Information on toxicology:

N/A

12. Environmental information:

Proper operation does not cause undue exhaust responsible for the increase of air, water and soil pollution.

13. Instruction for disposal:

Thorium alloyed tungsten electrodes must not be disposed together with conventional or household waste. Left over pieces have to be disposed in accordance with Radiation Protective Law (StrlSchV).

14. Transport regulations:

No regulations applicable within the scope of GGVS/GGVE/ADR.

Transport can be identified as general exception no. 9 (E, S) of the Dangerous Goods Exception Regulation for road and railroad transport. There is no restriction concerning composition (WT10 – WT40) and quantity of transport.

Quantity limitations must be considered when loading with goods of other categories from the Dangerous Good Regulation (e.g. explosive or highly inflammable materials). The total quantity of all dangerous goods in one vehicle may not exceed 50 kg.

15. Regulations

Handling of thorium alloyed tungsten electrodes is controlled by the Radiation Protection Law (StrlSchV). Use of electrodes is of state approval and authorization.

Further regulations only applicable and valid for TIG welding procedure

16. Miscellaneous

All information is based on current state of knowledge; this information does not represent any guarantee of product properties and does not constitute any contractual legal obligation.

Products may only be used as mentioned. If the products are used improperly risks which are not described in the safety data sheet are possible.

Information is provided here in a way which is best understood and acted upon by qualified personnel.

According to definitions found in EN-60204-1:

Qualified personnel are persons who, based on their special training, knowledge, experience and due to their knowledge of relevant standards, are able to assess the tasks assigned to them and identify possible dangers.