

# Safety Data Sheet

Issue  
10/0206

## Tungsten Electrodes Zirconiated



### 1. General characterization

**1.1 Chemical characterization:** W + Ca, Tungsten, Zirconiated

**1.2 Hazardous ingredients:**

Ingredient: Tungsten Alloying element: max. 0.9 % Zirconia

**1.3 Condition:** solid

**1.4 Appearance:** steel grey surface

**1.5 Odour:** None

### 2. Physical and safety data

**2.1 Boiling point:** 5900 °C (6173 K)

**2.2 Vapour pressure:** not volatile

**2.3 Vapour density:** not volatile

**2.4 Solubility of water:** insoluble

**2.5 Density:** 19.3 g/cm<sup>3</sup>

**2.6 Percent, volatile by volume:** 0

**2.7 Evaporation rate:** not volatile

Comments: Tungsten has a high density. Powder/dusts will settle quickly.

**2.8 Flashpoint:** N/A

**2.9 Flammable limits:** N/A

**2.10 Others:** Zirconiated tungsten powder/dust e.g. grinding dust may be a weak fire and explosion hazard depending on particle size and dispersion in air.

**2.11 Reactivity data:**

**2.11.1 Stability:** stable

**2.11.2 Incompatibility:** Strong Oxidisers

**2.11.3 Hazardous decomposition products:** WOS-vapour at high temperatures > 800 °C (1073 K), not toxic  
**2.11.4 Hazardous polymerization:** will not occur

### 3. Transport

No special precautions needed

### 4. Prescriptions

No special prescriptions to take into consideration

### 5. Protection, storage and handling

**5.1 Technical protection:**

Ventilation: Local exhaust

**5.2 Personal protection:**

Respiratory protection: use respirators during grinding

Protective gloves: not necessary

Eye protection: safety glasses

Other protective equipment: depending on local conditions

**5.3 Storage:** No precautions necessary

**5.4 Waste disposal:** Dispose of in accordance with federal, state and local laws and regulations.

### 6. Precautions in case of accidents with fire

**6.1 Spill and leak procedures: Steps to be taken in**

Case material is spilled or released provide clean-up employees with respirators for dusty conditions (grinding dust).

**6.1 Extinguishing media:** dry chemical, sand or Limestone

**6.2 Emergency and first aid procedures:** If a person breathes in large amounts of dust, remove from exposure. If material gets in eyes, flush particles from eyes with water. Consult a physician.

### 7. Health hazard data

**7.11 Special health hazard:** Reference available at this time do not report ill/health effects as a result to exposure to Zirconiated tungsten, provided safety regulations are observed.

**7.12 Hazardous mixtures of other liquids, solids or gases:** Zirconia belongs to the rare earth. No toxicity or other adverse health effects are known.

### 8. Oecological data

No special prescriptions.  
Ventilation over filter.