SAFETY DATA SHEET

TUNGSTEN CARBIDE (WC, Co-HARD METAL) PRODUCTS

1. Identification of the Substance/Preparation and of the Company/Undertaking

Substance name: Tuugsten Carbide (WC, Co) - hard metal

Application: Wear products and cutting tools

Company name: CERATIZIT India Pvt. Ltd.

Company address:

16J, Attibele Industrial Area, Anekal Taluk, Bengaluru 562107, India www.ceratizit.com

Site Address 1:

Plot no.56, Uluberia Industrial Growth Centre, Birshibpur, Uluberia, Howrah 711316, India Tel.: +91 33 2621 0026

Site Address 2:

Plot 124-A, Bommasandra Industrial Area, Anekal Taluk, Bengaluru 560099, India, Tel.: +91 80 4043 1216

2. Hazards Identification

Classification:

- Co: Xn, R 42/43: Harmful, may cause sensitization by inhalation and skin contact
- Prolonged exposure to WC by inhalation may cause pulmonary fibrosis

3. Composition / Information on Ingredients

Composition:

- 70-80% tungsten (W), CAS-No: 7440-33-7
- 20-30% cobalt (Co), CAS-No: 7440-48-4

Dangerous components:

- Co, CAS-No: 7440-48-4

4. First-Aid Measures

Inhalation: Supply fresh air, consult doctor as a precaution
Skin contact: Remove dust by washing with water and soap

5. Fire-Fighting Measures

Suitable extinguishing agents: Substance is not combustible, adapt extinguishing agent to materials stored in the immediate neighborhood

Special risk: Dust formation enhances the fire risk

Protective equipment: Respiratory equipment in case of dust formation

6. Accidental Release Measures

Person-related safety precautions: Avoid dust formation, provide adequate ventilation, avoid skin contact

Environmental protection measures: Avoid release to the environment

7. Handling and Storage

Handling: Prevent dust formation, install exhaustion with filter at workplaces with unavoidable dust

Storage: No special requirements

8. Exposure Controls / Personal Protection

Exposure limit values:

- Workplace: 5 mg W/m³, 0.5 mg Co/m³, inhalable fraction, daily average
- Emission of suspended particles: 20 mg WC/m³, 0.05 mg Co/m³
- Water emissions: 2 mg W/l, 0.5 mg Co/l

Exposure at workplace: Install exhaustion at dust building workplaces and use protective mask P3, use protective clothes and hand-guard cream

Environmental exposure: Install exhaustion with filter at workplaces with unavoidable dust, do not empty into drains

9. Physical and Chemical Properties

Appearance: Grey solid
Melting point: 1250 – 1300 °C
Density: 12.1 – 15.6 g/cm³ at 20 °C
Solubility: Insoluble in water, Co soluble in acids

10. Stability and Reactivity

Conditions to be avoided: Heating in air (oxidation)
Materials to be avoided: Acids (formation of hydrogen)

11. Toxicological Information

Inhalation: LC50 by inhalation, rat: < 0.24 – 0.92 mg/l/4h, prolonged exposure may cause pulmonary fibrosis ("hard metal disease")
Skin contact: May cause sensitization of skin

12. Ecological Information

Ecotoxicity: No ecotoxic effects known
Mobility: On the basis of low solubility, low mobility
Persistence and biodegradability: Stable inorganic material
Bio accumulative potential: No data available

13. Disposal considerations

Recycling: CERATIZIT recycles hard metal in all possible shapes, contacts see under point 1
European waste catalogue: 120104 non-ferrous metal dust and particles,
*Notice national and regional regulations.

14. Transport information

Not a dangerous good according to ADR, RID, IMDG, ICAO/IATA

15. Regulatory information

Labelling: No labelling required for metals in compact shape
Other regulations: *The exposure limit values stated under point 8 are the lowest European limit values known to us *Notice national regulations.

16. Other information

The above-mentioned information is based on our present knowledge *The LC50-value stated under point 11 is based on an unconfirmed study of acute inhalation toxicity on rats (Huntingdon Life Science 1999).