POWDERLOOP

SAFETY DATA SHEET

Section 1. Identification

Product name: Tungsten Carbide Based Powder
Product code: P-WC207

Supplier's details: PowderLoop Technology Ltd.
40 Warner Drive
Springwood Industrial Estate
Braintree, Essex
United Kingdom
CM7 2YW

Emergency tel: +44 7477 552959 9am-3:30pm Mon-Fri

Emergency Action: In the event of a medical enquiry involving this product, please contact your doctor or local hospital accident and emergency department.

Section 2. Hazards Identification

Classification according to European Regulation (EC) No. 1272/2008
Skin Sens. 1
Carc. 2
STOT RE 2
Aquatic Chronic 3

GB CLP hazard pictograms:

Hazard codes and statements
H317 - May cause an allergic skin reaction.
H351 - Suspected of causing cancer.
H373 - May cause damage to organs through prolonged or repeated exposure.
H412 - May cause long-lasting harmful effects to aquatic life.

Precaution/Prevention
: Wear protective gloves, eye or face protection, protective clothing. Wash hands thoroughly after handling.

: If in EYES: Rinse with plenty of water. Remove contact lense and continue rinsing. If eye irritation persists: Get medical attention.

: Target Organs: Lungs and respiratory syste. Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

: Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.

Section 3. Composition /information on ingredients

Chemical name:	wt%
Tungsten carbide	73
Chromium carbide	20
Nickel	7

Section 4. First-aid measures

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If necessarry, provide artificial respiration or oxygen by trained personnel. Get medical attention immediately. Maintain an open airway.
Adverse symptoms may include respiratory tract irritation and coughing.

Eye: Immediately flush eyes with plenty of wate for at least 10min. Remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
Adverse symptoms may include irritation, watering and redness.

Ingestion: Wash out mouth with plenty of water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. If vomitting and/or unconscious, get medical attention immediately.
Adverse symptom: no specific data.

Skin contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention.
Adverse symptom: no specific data.

Section 5. Fire-fighting measures

Extinguishing media: Use approved Class D extinguisher or smother with dry sand, dry clay or dry ground limestone. **Do not use** water. Do not use dry chemical, CO_2 or halon.
Decomposition prodcuts may include carbon dioxide, carbon monoxide, metal oxide/oxides.
Fire Fighting Instructions: Keep people away. Promptly isolate the scene. Dust explosion hazard may result from forceful application offire extinguishing agents. Soak thoroughly with water to cool and prevent reignition.
Protective Equipment for Fire Fighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing(includes fire fightinghelmet, coat, pants, boots, and gloves).

Section 6. Accidental release measures

Small spill: Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill: Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Handling: Good housekeeping and controlling of dusts are necessary for safe handling of prodcut. No smoking, open flames or sourcess of ignition in handling and storage area.
Storage: Store in a cool dry place. Keep containers tightly closed when not in use.

Section 8. Exposure controls / personal protection

Occupational exposure limit:

Name	Exposure limits	Comment
Tungsten & compounds	10 mg.m-3 (15-minute reference period) 5 mg.m-3 (8-hr TWA reference period)	
Chromium	0.5 mg.m-3 (8-hr TWA reference period)	
Nickel & compounds	0.5 mg.m-3 (8-hr TWA reference period)	Carcinogen, Can obsorb through skin, May cause asthma

Engineering measures: Use adequate ventilation. Consider using local exhaust ventilation.
Hygienic measures: Wash hands, do not eat, drink or smoke when using.
Personal protection: Wear rubber/latex gloves and lab coat
Respiratory system: Wear suitable dusk mask.
Eyes: Wear safety glass or goggles.

Section 9. Physical and chemical properties

Appearance

Colour	Dark Grey
Physical state	Powder
Specific gravity	4.1 g/cu.cm
Boiling point	5600°C
Soluble in water	Insoluble

Section 10. Stability and reactivity

Reactivity : No specific data.
Chemical stability : Stable
Hazardous reactions : Should not occur under normal conditions of storage and use.

Conditions to avoid	: Avoid the creation of dust when handlingand avoid all possible sources of ignition e.g. spark or flame, and electrostatic discharges.
Incompatible materials	: Oxidising materials
Hazardous decomposition	: Should not occur under normal conditions of storage and use.

Section 11. Toxicological information

Not available

See Section 4 for potential health effects

Section 12. Ecological information

No relevant information found.

Section 13. Disposal considerations

Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

Not available.

Section 15. Regulatory information

European Regulation (EC) No. 1272/2008

Section 16. Other information

None

DISCLAIMER The data in this Material Safety Data Sheet (MSDS) relates only to the speciic material designated herein and does not relate to use in combination with any other material or in any process. To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.