

SAFETY DATA SHEET

according to 29 CFR 1910.1200 and ANSI standard Z400.1-2010



Tungsten Carbide Burs

Product number 029

Revision date: Dec/20/2019
Version: 5

Language: en-US,CA

Date of print: Jan/9/2020
Page: 1 of 9

1. Product and company identification

Product identifier

Trade name: Tungsten Carbide Burs

Relevant identified uses of the substance or mixture and uses advised against

General use: Tungsten Carbide Burrs for metal machining
For industrial purposes only

Details of the supplier of the safety data sheet

Company name:
PFERD INC.
Street/POB-No.: 9201 W. Heather Ave.
Postal Code, city: Milwaukee, WI 53224,
USA
WWW: www.pferdusa.com
E-mail: sales@pferdusa.com
Telephone: 1-800-342-9015
Telefax: 262-255-2840
Department responsible for information:
1-800-342-9015

PFERD CANADA INC.
Street/POB-No.: 5570 McAdam Road
Postal Code, city: Mississauga, Ontario L4Z 1P1,
Canada
WWW: www.pferdusa.com
E-mail: sales@pferdcanada.ca
Telephone: (905) 501-1555
Telefax: (905) 501-1554
Department responsible for information: 1-866-245-1555

Emergency phone number

USA/Canada: 1-800-255-3924

2. Hazards identification

Emergency overview

Appearance: Form: solid
Color: gray
Odor: No data available
Classification: Acute Toxicity - oral - Category 4; Acute Toxicity - inhalative - Category 2; Eye Irritation - Category 2A; Respiratory Sensitizer - Category 1; Sensitization - skin - Category 1; Carcinogenicity - Category 1B; Reproductive toxicity - Category 2; Aquatic toxicity - acute - Category 1 (M-factor = 10); Aquatic toxicity - chronic - Category 1 (M-factor = 1);

Hazard symbols:



Signal word:

Danger

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Hazard statements: Harmful if swallowed.
May cause an allergic skin reaction.
Causes serious eye irritation.
Fatal if inhaled.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause cancer.
Suspected of damaging fertility.
Very toxic to aquatic life with long lasting effects.

Precautionary Statements: Obtain special instructions before use.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash hands and face thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
In case of inadequate ventilation wear respiratory protection.
IF ON SKIN: Wash with plenty of water/soap.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/attention.
Immediately call a POISON CENTER/doctor.
Specific treatment is urgent (see ' First aid ' on this label).
Rinse mouth.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
Wash contaminated clothing before reuse.
Collect spillage.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container to hazardous or special waste collection point.

Additional information The hazard identification is based on a formalistic procedure as the hazard statements of the ingredients are summarized under section 3. This does not correspond to the hazardousness of the product itself.

Regulatory status

This material is considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200) and WHMIS in Canada.

Hazards not otherwise classified

Mechanical processing can produce particles and dust. Comply with occupational limit values for dust.
see section 11: Toxicological information

3. Composition / Information on ingredients

Chemical characterization: Tungsten Carbide Burrs

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Relevant ingredients:

| CAS No. | Designation | Content | Classification |
|----------------|-----------------------|----------|--|
| CAS 12070-12-1 | Tungsten carbide | >= 40 % | not classified |
| CAS 7440-48-4 | Cobalt | 5 - 30 % | Acute Toxicity - oral - Category 4. Acute Toxicity - inhalative - Category 1. Eye Irritation - Category 2A. Respiratory Sensitizer - Category 1. Sensitization - skin - Category 1. Carcinogenicity - Category 1B. Reproductive toxicity - Category 2. Aquatic toxicity - acute - Category 1 (M-factor = 10). Aquatic toxicity - chronic - Category 1 (M-factor = 1). |
| CAS 12070-08-5 | titanium carbide | 0 - 5 % | not classified |
| CAS 12070-06-3 | tantalum carbide | 0 - 5 % | not classified |
| CAS 12069-94-2 | niobium carbide | 0 - 5 % | not classified |
| CAS 12070-10-9 | vanadium carbide | 0 - 1 % | not classified |
| CAS 12012-35-0 | trichromium dicarbide | 0 - 1 % | not classified |

Additional information: The product can be coated.

4. First aid measures

- In case of inhalation: Provide fresh air. Immediately get medical attention.
- Following skin contact: Remove residues with soap and water. In case of skin reactions, consult a physician.
- After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. In case of troubles or persistent symptoms, consult an ophthalmologist.
- After swallowing: Rinse mouth with water. Immediately get medical attention.

Most important symptoms/effects, acute and delayed

Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.
Fatal if inhaled. Harmful if swallowed. May cause an allergic skin reaction. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Information to physician

Treat symptomatically.

5. Fire fighting measures

Flash point/flash point range:

No data available

Auto-ignition temperature: No data available

Suitable extinguishing media:

Product is non-combustible. Extinguishing materials should therefore be selected according to surroundings.

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Specific hazards arising from the chemical

May form dangerous gases and vapours in case of fire.
In case of fire may be liberated: Metallic oxides, carbon monoxide and carbon dioxide.

Protective equipment and precautions for firefighters:

Wear self-contained breathing apparatus. Wear suitable protective clothing.

6. Accidental release measures

Personal precautions: Wear personal protection equipment. Provide adequate ventilation.
Do not inhale vapors or dust particles. Avoid exposure.
Use suitable eye protection.

Environmental precautions:
Discharge into the environment must be avoided.
In case of release, notify competent authorities.

Methods for clean-up: Take up mechanically, placing in appropriate containers for disposal.
Avoid generation of dust.

7. Handling and storage

Handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Use local exhaust in the field of the processing equipment.
Do not breathe dust. Avoid contact with skin and eyes.
Use suitable eye protection. Wear suitable protective clothing.
Obtain special instructions before use. The product is to be handled with extreme caution.

Storage

Requirements for storerooms and containers:
Store container tightly closed in a dry area.
Protect from moisture contamination.

Hints on joint storage: Keep away from Acids and alkalis.

8. Exposure controls / personal protection

Exposure guidelines

Occupational exposure limit values:

| CAS No. | Designation | Type | Limit value |
|-----------|-------------|-----------------------------|---|
| 7440-48-4 | Cobalt | Canada, Alberta: OEL 8 hour | 0.02 mg/m ³ |
| | | Canada, Québec: VEMP | 0.02 mg/m ³ |
| | | USA: ACGIH: TWA | 0.02 mg/m ³ (inhalable fraction) |
| | | USA: NIOSH: TWA | 0.05 mg/m ³ |
| | | USA: OSHA: TWA | 0.1 mg/m ³ |

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Biological limit values:

| CAS No. | Designation | Type | Limit value | Parameter | Sampling |
|-----------|-------------|-----------------------------|-------------|--|------------------------------------|
| 7440-48-4 | Cobalt | USA: ACGIH-BEI, urine | 15 µg/L | Cobalt; not combined with Tungsten Carbide | end of shift at end of workweek |

Engineering controls

Provide good ventilation and/or an exhaust system in the work area.
Mechanical effects, e.g. high pressure, can produce splinters and dust.
See also information in chapter 7, section storage.

Personal protection equipment (PPE)

Eye/face protection: Wear eye glasses with side protection according to EN 166.

Skin protection: Wear suitable protective clothing and shoes.

Protective gloves according to OSHA Standard - 29 CFR: 1910.138.

If necessary:

Protective gloves against thermic risks.

Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Respiratory protection: Dust mask

Particulates filter N100 according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2.

General hygiene considerations:

Avoid contact with skin and eyes.

Do not breathe dust. When using do not eat, drink or smoke.

Wash hands before breaks and after work. Obtain special instructions before use.

9. Physical and chemical properties

Information on basic physical and chemical properties

| | |
|--|-----------------------------------|
| Appearance: | Form: solid Color: gray |
| Odor: | No data available |
| Odor threshold: | No data available |
| pH value: | No data available |
| Melting point/freezing point: | 2723 - 5028.8 °F (1495 - 2776 °C) |
| Initial boiling point and boiling range: | No data available |
| Flash point/flash point range: | No data available |
| Evaporation rate: | No data available |
| Flammability: | No data available |
| Explosion limits: | No data available |
| Vapor pressure: | No data available |
| Vapor density: | No data available |
| Density: | No data available |
| Water solubility: | Insoluble |
| Partition coefficient: n-octanol/water: | No data available |

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Auto-ignition temperature: No data available

Thermal decomposition: No data available

Additional information: No data available

10. Stability and reactivity

Reactivity: No data available

Chemical stability: Product is stable under normal storage conditions.

Possibility of hazardous reactions:
No hazardous reaction when handled and stored according to provisions.

Conditions to avoid: Keep away from heat. Protect from moisture contamination.

Incompatible materials: Acids and alkalis

Hazardous decomposition products:
May form dangerous gases and vapours in case of fire.
In case of fire may be liberated: Metallic oxides, carbon monoxide and carbon dioxide.

Thermal decomposition: No data available

11. Toxicological information

Toxicological tests

Toxicological effects: The statements are derived from the properties of the single components. No toxicological data is available for the product as such.

Acute toxicity (oral): Acute Toxicity - oral - Category 4 = Harmful if swallowed.

Acute toxicity (dermal): Based on available data, the classification criteria are not met.

Acute toxicity (inhalative): Acute Toxicity - inhalative - Category 2 = Fatal if inhaled. ATEmix (calculated): ATE = 0,2 mg/L.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/irritation: Eye Irritation - Category 2A = Causes serious eye irritation.

Sensitisation to the respiratory tract: Respiratory Sensitizer - Category 1 = May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin sensitisation: Sensitization - skin - Category 1 = May cause an allergic skin reaction.

Germ cell mutagenicity/Genotoxicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Carcinogenicity - Category 1B = May cause cancer.

Reproductive toxicity: Reproductive toxicity - Category 2 = Suspected of damaging fertility.

Effects on or via lactation: Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure): Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure): Based on available data, the classification criteria are not met.

Aspiration hazard: Based on available data, the classification criteria are not met.

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Other information: Cobalt-dust: Classified according to IARC: 2B (possible for humans).
Release of Cobalt:
Fatal if inhaled. Harmful if swallowed. May cause an allergic skin reaction. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause cancer by inhalation. Suspected of damaging fertility.
Information about tungsten carbide:
LD50, Rat, oral: > 2000 mg/kg (OECD 401)
LC50, Rat, inhalative (dusts/mist): > 5,3 mg/L/4h (OECD 403)
Information about Cobalt:
LD50, Rat, oral: 550 mg/kg (OECD 425)
LC50, Rat, inhalative (dusts/mist): < 0.05 mg/L/4h (OECD 436)
LD50, Rat, dermal: > 2000 mg/kg

Symptoms

In case of inhalation:
dusts: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
shortage of breath, Cough, sore throat, headache
In case of ingestion: dusts: gastrointestinal irritation, dizziness, nausea, vomiting.
After contact with skin: dusts: May cause an allergic skin reaction.
Prolonged/repetitive skin contact may cause skin defatting or dermatitis.
After eye contact: dusts: Causes serious eye irritation.

12. Ecological information

Ecotoxicity

Aquatic toxicity: Information about Cobalt: Very toxic to aquatic life with long lasting effects.
Algae toxicity:
EC50 Selenastrum capricornutum: 0.035 mg/L/72 h
Bacterial toxicity:
EC50 activated sludge: > 50 mg/L/3 h
Daphnia toxicity:
EC50 Daphnia magna (Big water flea): >100 mg/L/48 h
Fish toxicity:
LC50 Brachydanio rerio (zebra-fish): > 100 mg/L/96h
Information about tungsten carbide:
Algae toxicity:
EC50 Selenastrum capricornutum: 80 mg/L/72 h
Bacterial toxicity:
EC20 activated sludge: > 1000 mg/L/3 h
Daphnia toxicity:
EC50 Daphnia magna (Big water flea): >1000 mg/L/48 h
Fish toxicity:
LC50 Brachydanio rerio (zebra-fish): > 1000 mg/L/96h

Mobility in soil

No data available

Persistence and degradability

Further details: No data available

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Additional ecological information

General information: Discharge into the environment must be avoided.

13. Disposal considerations

Product

Recommendation: Dispose of waste according to applicable legislation.
Refer to manufacturer/supplier for information on recovery/recycling.

Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation.

14. Transport information

USA: Department of Transportation (DOT)

Proper shipping name: Not restricted

Canada: Transportation of Dangerous Goods (TDG)

Shipping name: Not restricted

Sea transport (IMDG)

Proper shipping name: Not restricted
Marine pollutant: not applicable

Air transport (IATA)

Proper shipping name: Not restricted

Further information

No dangerous good in sense of these transport regulations.

15. Regulatory information

National regulations - U.S. Federal Regulations

Product: This product is an article as defined by TSCA regulations, and is exempt from TSCA inventory listing requirements.

Cobalt: Carcinogen Status:
IARC Rating: Group 2B
OSHA Carcinogen: not listed
NTP Rating: not listed
Other Environmental Laws:
RCRA Groundwater Monitoring: Methods 6010, 7200, 720 / PQL 70, 500, 10
SARA Title III Section 313, Toxic Release: Conc. 0.1% / Threshold Standard
NIOSH Recommendations:
Occupational Health Guideline: 0146

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National regulations - U.S. State Regulations

Cobalt: California Proposition 65: cancer

National regulations - Canada

No data available

16. Other information

Hazard rating systems:



NFPA Hazard Rating:

Health: 3 (Serious)

Fire: 0 (Minimal)

Reactivity: 0 (Minimal)

HMIS Version III Rating:

Health: 3 (Serious) - Chronic effects

Flammability: 0 (Minimal)

Physical Hazard: 0 (Minimal)

Personal Protection: X = Consult your supervisor

| | | |
|-----------------|---|---|
| HEALTH | * | 3 |
| FLAMMABILITY | | 0 |
| PHYSICAL HAZARD | | 0 |
| | | X |

Reason of change: Changes in section 1, telephone Nr. USA

Date of first version: Dec/16/2015

Department issuing data sheet

Contact person: see section 1: Department responsible for information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products.