



# Diamond Tool

## Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations  
Revision Date: 07/29/2015 Date of issue: 07/08/2015

Version: 1.0

### SECTION 1: IDENTIFICATION

#### 1.1. Product Identifier

**Product Form:** Mixture

**Product Name:** Diamond Tool

**Synonyms:** DIAMOND CORE BITS, DIAMOND BLADES, CUP GRINDERS, DIAMOND SEGMENTS, DIAMOND WIRE and GRINDING DISCS

#### 1.2. Intended Use of the Product

**Use of the substance/mixture:** No use is specified.

#### 1.3. Name, Address, and Telephone of the Responsible Party

##### Company

Diamond Products Limited

333 Prospect Street

Elyria, OH 44035

T: (440) 323-4616

#### 1.4. Emergency Telephone Number

**Emergency Number** : (440) 323-4616

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the Substance or Mixture

##### Classification (GHS-US)

Not classified

#### 2.2. Label Elements

##### GHS-US Labeling

No labeling applicable

#### 2.3. Other Hazards

This product is physiologically inert in its massive form. However, user-generated dust and/or fumes may pose a physiological hazard if inhaled or ingested. Avoid inhalation of metal dusts and fumes, may cause an influenza-like illness. Avoid skin and eye contact with dusts to prevent mechanical irritation. User-generated dust is easily ignited and difficult to extinguish. This product contains components that are environmentally hazardous and small chips, fine turnings, and dust from processing may be toxic to aquatic life.

#### 2.4. Unknown Acute Toxicity (GHS-US)

No data available

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1. Substance

Not applicable

#### 3.2. Mixture

Name	Product Identifier	%	Classification (GHS-US)
Cobalt	(CAS No) 7440-48-4	1 - 100	Comb. Dust Acute Tox. 4 (Oral), H302 Acute Tox. 1 (Inhalation:dust,mist), H330 Eye Irrit. 2A, H319 Resp. Sens. 1B, H334 Skin Sens. 1, H317 Carc. 1B, H350 Repr. 2, H361 Aquatic Chronic 1, H410
Nickel	(CAS No) 7440-02-0	1 - 75	Comb. Dust Skin Sens. 1, H317 Carc. 2, H351 STOT RE 1, H372
Copper	(CAS No) 7440-50-8	1 - 60	Comb. Dust
Iron	(CAS No) 7439-89-6	1 - 50	Comb. Dust Flam. Sol. 1, H228 Self-heat. 1, H251

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Tungsten carbide	(CAS No) 12070-12-1	1 - 50	Not classified
Tin	(CAS No) 7440-31-5	1 - 20	Comb. Dust
Diamond	(CAS No) 7782-40-3	3 - 18	Not classified
Silver	(CAS No) 7440-22-4	1 - 15	Comb. Dust
Titanium	(CAS No) 7440-32-6	1 - 3	Comb. Dust Flam. Sol. 1, H228
Manganese	(CAS No) 7439-96-5	0.5 - 3	Comb. Dust
Chromium carbide (Cr <sub>3</sub> C <sub>2</sub> )	(CAS No) 12012-35-0	0.1 - 3	Not classified

Full text of H-phrases: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of First Aid Measures

**First-aid Measures General:** Never give anything by mouth to an unconscious person. If medical advice is needed, have product container or label at hand.

**First-aid Measures After Inhalation:** Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

**First-aid Measures After Skin Contact:** Cool skin rapidly with cold water after contact with molten product. Removal of solidified molten material from skin requires medical assistance. If cuts or injury occur, seek medical attention immediately.

**First-aid Measures After Eye Contact:** Removal of solidified molten material from the eyes requires medical assistance.

Immediately rinse with water for a prolonged period (at least 15 minutes) while holding the eyelids wide open. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

**First-aid Measures After Ingestion:** Do not induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

### 4.2. Most important symptoms and effects, both acute and delayed

**Symptoms/Injuries:** Under normal conditions of use not expected to present a significant hazard. During processing or physical alteration, flakes or powder cause irritation of the respiratory tract, eyes, skin, and are harmful. Molten material may release toxic and irritating fumes.

**Symptoms/Injuries After Inhalation:** During processing, the most significant route of exposure is by the inhalation (breathing) of fumes. If fumes are inhaled, they can cause a condition commonly known as metal fume fever with symptoms which resemble influenza; Symptoms may be delayed 4-12 hours and begin with a sudden onset of thirst, and a sweet, metallic or foul taste in the mouth. Other symptoms may include upper respiratory tract irritation accompanied by coughing and a dryness of the mucous membranes, lassitude and a generalized feeling of malaise. Fever, chills, muscular pain, mild to severe headache, nausea, occasional vomiting, exaggerated mental activity, profuse sweating, excessive urination, diarrhea and prostration may also occur.

**Symptoms/Injuries After Skin Contact:** Causes severe skin burns. Contact with fumes or metal powder will irritate skin. Contact with hot, molten metal will cause thermal burns. Dust may cause irritation in skin folds or by contact in combination with tight clothing. Mechanical damage via flying particles and chipped slag is possible. This material may have sharp edges may cause cuts, take appropriate precautions.

**Symptoms/Injuries After Eye Contact:** During metal processing, dusts caused from milling and physical alteration will likely cause eye irritation. Fumes from thermal decomposition or molten material will likely be irritating to the eyes. Mechanical damage via flying particles and chipped slag is possible.

**Symptoms/Injuries After Ingestion:** Ingestion is not considered a potential route of exposure.

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**Chronic Symptoms:** Copper: Overexposure to fumes may cause metal fume fever (chills, muscle aches, nausea, fever, dry throat, cough, weakness, and lassitude); metallic or sweet taste; discoloration of skin and hair. Tissue damage of mucous membranes may follow chronic dust exposure. Inhalation of iron oxide fumes undergoing decomposition may cause irritation and flu-like symptoms; otherwise iron oxide is not hazardous. Nickel: May cause a form of dermatitis known as nickel itch and intestinal irritation, which may cause disorders, convulsions and asphyxia. Inhalation of Nickel compounds has been shown in studies to provide an increased incidence of cancer of the nasal cavity, lung and possibly larynx in nickel refinery workers. Tin: Has been shown to increase incidence of sarcoma in animal tests. Chronic exposure to tin dusts and fume may result in "stannosis", a mild form of pneumoconiosis. Silver: Chronic skin contact or ingestion of silver dust, salts or fume can result in a condition known as Argyria, a condition with bluish pigmentation of the skin and eyes. Manganese: Chronic exposure can cause inflammation of the lung tissue, scarring the lungs (pulmonary fibrosis). Chronic exposure to excessive manganese levels can lead to a variety of psychiatric and motor disturbances, termed manganism. Chromium: Certain hexavalent chromium compounds have been demonstrated to be carcinogenic on the basis of epidemiological investigations on workers and experimental studies in animals. Increased incidences of respiratory cancer have been found in chromium (VI) workers. There is an increased incidence of lung cancer in industrial workers exposed to chromium (VI) compounds. Please refer to IARC volume 23 for a more detailed discussion. During the use of this product the generation of silica, crystalline (airborne particles of respirable size) may be released from the material being cut.

### 4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1. Extinguishing Media

**Suitable Extinguishing Media:** Use extinguishing media appropriate for surrounding fire.

**Unsuitable Extinguishing Media:** Do not use water when molten material is involved, may react violently or explosively on contact with water.

### 5.2. Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Dust, chips, or ribbons can be ignited more easily, by an ignition source, by improper machining, or by spontaneous combustion if finely divided and damp.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** Stable at ambient temperature and under normal conditions of use.

### 5.3. Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

**Firefighting Instructions:** Do not breathe fumes from fires or vapors from decomposition.

**Protection During Firefighting:** Firefighters must use full bunker gear including NIOSH-approved positive-pressure self-contained breathing apparatus to protect against potential hazardous combustion and decomposition products.

**Other Information:** Refer to Section 9 for flammability properties.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Do not handle until all safety precautions have been read and understood. Avoid breathing (vapors, dust, and fumes).

#### 6.1.1. For Non-emergency Personnel

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Avoid creating or spreading dust.

#### 6.1.2. For Emergency Responders

**Protective Equipment:** Equip cleanup crew with proper protection. Wear suitable protective clothing, gloves and eye/face protection.

**Emergency Procedures:** Eliminate ignition sources. Evacuate unnecessary personnel, isolate, and ventilate area.

### 6.2. Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and Material for Containment and Cleaning Up

**For Containment:** Contain and collect as any solid. Avoid generation of dust during clean-up of spills.

**Methods for Cleaning Up:** Use clean non-sparking tools to collect material and place it into loosely covered plastic containers for later disposal.

### 6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

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## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for Safe Handling

**Additional Hazards When Processed:** Do not allow water (or moist air) contact with this material. Product dust is combustible. Use care during processing to minimize generation of dust.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product. Wash hands and forearms thoroughly after handling. Always wash your hands immediately after handling this product, and once again before leaving the workplace.

### 7.2. Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Comply with applicable regulations.

**Storage Conditions:** Store in original container. Store in dry protected location to prevent any moisture contact. Keep away from heat and flame.

**Incompatible Products:** Strong acids. Strong bases. Strong oxidizers. Water, humidity. Alkalis. Corrosive substances in contact with metals may produce flammable hydrogen gas.

**Special Rules on Packaging:** Store in a closed container.

### 7.3. Specific End Use(s)

No use is specified.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), or OSHA (PEL).

Cobalt (7440-48-4)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup>
USA ACGIH	ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup> (dust and fume)
USA IDLH	US IDLH (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup> (dust and fume)
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (dust and fume)
Copper (7440-50-8)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> (dust and mist) 0.1 mg/m <sup>3</sup> (fume)
USA IDLH	US IDLH (mg/m <sup>3</sup> )	100 mg/m <sup>3</sup> (dust, fume and mist)
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust and mist)
Nickel (7440-02-0)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup> (inhalable fraction)
USA ACGIH	ACGIH chemical category	Not Suspected as a Human Carcinogen
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0.015 mg/m <sup>3</sup>
USA IDLH	US IDLH (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Tin (7440-31-5)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
USA IDLH	US IDLH (mg/m <sup>3</sup> )	100 mg/m <sup>3</sup>
Silver (7440-22-4)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (dust and fume)
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0.01 mg/m <sup>3</sup> (dust)
USA IDLH	US IDLH (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (dust)
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.01 mg/m <sup>3</sup>
Manganese (7439-96-5)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup> (respirable fraction) 0.1 mg/m <sup>3</sup> (inhalable fraction)
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> (fume)

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<b>USA NIOSH</b>	NIOSH REL (STEL) (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
<b>USA IDLH</b>	US IDLH (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>
<b>USA OSHA</b>	OSHA PEL (Ceiling) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (fume)

### 8.2. Exposure Controls

#### Appropriate Engineering Controls

: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Avoid dust production. Avoid creating or spreading dust. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

#### Personal Protective Equipment

: Safety glasses. Gloves. Insufficient ventilation: wear respiratory protection. Protective clothing.



#### Materials for Protective Clothing

: With molten material wear thermally protective clothing.

#### Hand Protection

: Wear chemically resistant protective gloves. If material is hot, wear thermally resistant protective gloves.

#### Eye Protection

: Chemical goggles or face shield. Face shield.

#### Skin and Body Protection

: Wear suitable protective clothing.

#### Respiratory Protection

: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits. Wear approved mask.

#### Thermal Hazard Protection

: If material is hot, wear thermally resistant protective gloves.

#### Environmental Exposure Controls

: Do not allow the product to be released into the environment.

#### Consumer Exposure Controls

: Do not eat, drink or smoke during use.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on Basic Physical and Chemical Properties

Physical State	: Solid
Appearance	: Metallic- Silver Grey to Black
Odor	: Odorless
Odor Threshold	: No data available
pH	: No data available
Evaporation Rate	: No data available
Melting Point	: 2719 °F (1492.78 °C)
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: No data available
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor Pressure	: No data available
Relative Vapor Density at 20 °C	: No data available
Relative Density	: No data available
Specific Gravity	: 8.5 - 15.0
Solubility	: Not soluble in water
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: No data available

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## 9.2. Other Information

No additional information available

## SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity:** Stable at ambient temperature and under normal conditions of use.
- 10.2. Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).
- 10.3. Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4. Conditions to Avoid:** Protect from moisture. Incompatible materials.
- 10.5. Incompatible Materials:** Strong acids. Strong bases. Strong oxidizers. Water, humidity. Alkalis. Corrosive substances in contact with metals may produce flammable hydrogen gas.
- 10.6. Hazardous Decomposition Products:** Under conditions of fire this material may produce: Oxides of iron. Oxides of copper.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information On Toxicological Effects

Acute Toxicity: Not classified

<b>Cobalt (7440-48-4)</b>	
LD50 Oral Rat	215.9 - 1140 mg/kg
LC50 Inhalation Rat	> 10 mg/l (Exposure time: 1 h)
ATE (Oral)	215.90 mg/kg body weight
ATE (Dust/Mist)	0.01 mg/l/4h
<b>Iron (7439-89-6)</b>	
LD50 Oral Rat	98.6 g/kg
<b>Nickel (7440-02-0)</b>	
LD50 Oral Rat	> 9000 mg/kg
<b>Tin (7440-31-5)</b>	
LD50 Oral Rat	700 mg/kg
<b>Silver (7440-22-4)</b>	
LD50 Oral Rat	> 2000 mg/kg
<b>Manganese (7439-96-5)</b>	
LD50 Oral Rat	> 2000 mg/kg

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

<b>Cobalt (7440-48-4)</b>	
IARC group	2B
National Toxicology Program (NTP) Status	Evidence of Carcinogenicity.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
<b>Nickel (7440-02-0)</b>	
IARC group	2B
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Aspiration Hazard: Not classified

**Symptoms/Injuries After Inhalation:** During processing, the most significant route of exposure is by the inhalation (breathing) of fumes. If fumes are inhaled, they can cause a condition commonly known as metal fume fever with symptoms which resemble influenza; Symptoms may be delayed 4-12 hours and begin with a sudden onset of thirst, and a sweet, metallic or foul taste in the mouth. Other symptoms may include upper respiratory tract irritation accompanied by coughing and a dryness of the mucous membranes, lassitude and a generalized feeling of malaise. Fever, chills, muscular pain, mild to severe headache, nausea, occasional vomiting, exaggerated mental activity, profuse sweating, excessive urination, diarrhea and prostration may also occur.

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**Symptoms/Injuries After Skin Contact:** Causes severe skin burns. Contact with fumes or metal powder will irritate skin. Contact with hot, molten metal will cause thermal burns. Dust may cause irritation in skin folds or by contact in combination with tight clothing. Mechanical damage via flying particles and chipped slag is possible. This material may have sharp edges may cause cuts, take appropriate precautions.

**Symptoms/Injuries After Eye Contact:** During metal processing, dusts caused from milling and physical alteration will likely cause eye irritation. Fumes from thermal decomposition or molten material will likely be irritating to the eyes. Mechanical damage via flying particles and chipped slag is possible.

**Symptoms/Injuries After Ingestion:** Ingestion is not considered a potential route of exposure.

**Chronic Symptoms:** Copper: Overexposure to fumes may cause metal fume fever (chills, muscle aches, nausea, fever, dry throat, cough, weakness, and lassitude); metallic or sweet taste; discoloration of skin and hair. Tissue damage of mucous membranes may follow chronic dust exposure. Inhalation of iron oxide fumes undergoing decomposition may cause irritation and flu-like symptoms; otherwise iron oxide is not hazardous. Nickel: May cause a form of dermatitis known as nickel itch and intestinal irritation, which may cause disorders, convulsions and asphyxia. Inhalation of Nickel compounds has been shown in studies to provide an increased incidence of cancer of the nasal cavity, lung and possibly larynx in nickel refinery workers. Tin: Has been shown to increase incidence of sarcoma in animal tests. Chronic exposure to tin dusts and fume may result in "stannosis", a mild form of pneumoconiosis. Silver: Chronic skin contact or ingestion of silver dust, salts or fume can result in a condition known as Argyria, a condition with bluish pigmentation of the skin and eyes. Manganese: Chronic exposure can cause inflammation of the lung tissue, scarring the lungs (pulmonary fibrosis). Chronic exposure to excessive manganese levels can lead to a variety of psychiatric and motor disturbances, termed manganism. Chromium: Certain hexavalent chromium compounds have been demonstrated to be carcinogenic on the basis of epidemiological investigations on workers and experimental studies in animals. Increased incidences of respiratory cancer have been found in chromium (VI) workers. There is an increased incidence of lung cancer in industrial workers exposed to chromium (VI) compounds. Please refer to IARC volume 23 for a more detailed discussion. During the use of this product the generation of silica, crystalline (airborne particles of respirable size) may be released from the material being cut.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

Cobalt (7440-48-4)	
LC50 Fish 1	> 100 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
NOEC chronic fish	0.21 mg/l
NOEC chronic crustacea	0.0608 (0.0608 - 0.0933)
Copper (7440-50-8)	
LC50 Fish 1	<= 0.0068 (0.0068 - 0.0156) mg/l (Exposure time: 96 h - Species: Pimephales promelas)
EC50 Daphnia 1	0.03 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 Other Aquatic Organisms 1	0.0426 (0.0426 - 0.0535) mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata [static])
LC 50 Fish 2	0.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Other Aquatic Organisms 2	0.031 (0.031 - 0.054) mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata [static])
Nickel (7440-02-0)	
LC50 Fish 1	100 mg/l (Exposure time: 96 h - Species: Brachydanio rerio)
EC50 Daphnia 1	13 (13 - 200) µg/l (Exposure time: 48h - Species: Ceriodaphnia dubia [static])
LC 50 Fish 2	1.3 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [semi-static])
EC50 Daphnia 2	1 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 Other Aquatic Organisms 2	0.174 (0.174 - 0.311) mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata [static])
Silver (7440-22-4)	
LC50 Fish 1	0.00155 (0.00155 - 0.00293) mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 1	0.00024 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC 50 Fish 2	0.0062 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
Manganese (7439-96-5)	
NOEC chronic fish	3.6 mg/l (Exposure time: 96h; Species: Oncorhynchus mykiss)

### 12.2. Persistence and Degradability

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<b>Copper (7440-50-8)</b>	
<b>Persistence and Degradability</b>	Not readily biodegradable.

## 12.3. Bioaccumulative Potential

<b>Cobalt (7440-48-4)</b>	
<b>BCF fish 1</b>	(no bioaccumulation)

## 12.4. Mobility in Soil

No additional information available

## 12.5. Other Adverse Effects

**Other Information** : Avoid release to the environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

**Sewage Disposal Recommendations:** Do not empty into drains; dispose of this material and its container in a safe way.

**Additional Information:** Recycle the material as far as possible.

**Ecology – Waste Materials:** Avoid release to the environment.

## SECTION 14: TRANSPORT INFORMATION

**14.1. In Accordance with DOT** Not regulated for transport

**14.2. In Accordance with IMDG** Not regulated for transport

**14.3. In Accordance with IATA** Not regulated for transport

## SECTION 15: REGULATORY INFORMATION

### 15.1 US Federal Regulations

<b>Cobalt (7440-48-4)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on United States SARA Section 313	
<b>SARA Section 311/312 Hazard Classes</b>	Immediate (acute) health hazard Delayed (chronic) health hazard
<b>SARA Section 313 - Emission Reporting</b>	0.1 %
<b>Iron (7439-89-6)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>SARA Section 311/312 Hazard Classes</b>	Fire hazard
<b>Copper (7440-50-8)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on United States SARA Section 313	
<b>SARA Section 313 - Emission Reporting</b>	1.0 %
<b>Tungsten carbide (12070-12-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Nickel (7440-02-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on United States SARA Section 313	
<b>RQ (Reportable quantity, section 304 of EPA's List of Lists)</b>	100 lb (only applicable if particles are < 100 µm)
<b>SARA Section 311/312 Hazard Classes</b>	Immediate (acute) health hazard Delayed (chronic) health hazard
<b>SARA Section 313 - Emission Reporting</b>	0.1 %
<b>Titanium (7440-32-6)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Tin (7440-31-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Silver (7440-22-4)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on United States SARA Section 313	
<b>RQ (Reportable quantity, section 304 of EPA's List of Lists)</b>	1000 lb < 100 µm CERCLA/SARA RQ CHANGE TITLE
<b>SARA Section 313 - Emission Reporting</b>	1.0 %



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<b>Manganese (7439-96-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on United States SARA Section 313	
<b>SARA Section 313 - Emission Reporting</b>	1.0 %
<b>Chromium carbide (Cr<sub>3</sub>C<sub>2</sub>) (12012-35-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Diamond (7782-40-3)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

### 15.2 US State Regulations

<b>Cobalt (7440-48-4)</b>	
<b>U.S. - California - Proposition 65 - Carcinogens List</b>	WARNING: This product contains chemicals known to the State of California to cause cancer.
<b>Nickel (7440-02-0)</b>	
<b>U.S. - California - Proposition 65 - Carcinogens List</b>	WARNING: This product contains chemicals known to the State of California to cause cancer.
<b>Cobalt (7440-48-4)</b>	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
U.S. - Pennsylvania - RTK (Right to Know) List	
<b>Copper (7440-50-8)</b>	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
U.S. - Pennsylvania - RTK (Right to Know) List	
<b>Tungsten carbide (12070-12-1)</b>	
U.S. - New Jersey - Right to Know Hazardous Substance List	
<b>Nickel (7440-02-0)</b>	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances	
U.S. - Pennsylvania - RTK (Right to Know) List	
<b>Titanium (7440-32-6)</b>	
U.S. - New Jersey - Right to Know Hazardous Substance List	
<b>Tin (7440-31-5)</b>	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) List	
<b>Silver (7440-22-4)</b>	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
U.S. - Pennsylvania - RTK (Right to Know) List	
<b>Manganese (7439-96-5)</b>	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
U.S. - Pennsylvania - RTK (Right to Know) List	

### SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

<b>Revision Date</b>	: 07/29/2015
<b>Other Information</b>	: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

# Diamond Tool

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### GHS Full Text Phrases:

Acute Tox. 1 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 1
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Carc. 1B	Carcinogenicity Category 1B
Carc. 2	Carcinogenicity Category 2
Comb. Dust	Combustible Dust
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Sol. 1	Flammable solids Category 1
Repr. 2	Reproductive toxicity Category 2
Resp. Sens. 1B	Respiratory sensitisation Category 1B
Self-heat. 1	Self-heating substances and mixtures Category 1
Skin Sens. 1	Skin sensitization Category 1
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
H228	Flammable solid
	May form combustible dust concentrations in air
H251	Self-heating: may catch fire
H302	Harmful if swallowed
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H330	Fatal if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H350	May cause cancer
H351	Suspected of causing cancer
H361	Suspected of damaging fertility or the unborn child
H372	Causes damage to organs through prolonged or repeated exposure
H410	Very toxic to aquatic life with long lasting effects

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

SDS US (GHS HazCom)