



# MATERIAL SAFETY DATA SHEET

PART NUMBERS: 101050, 101051

## SECTION 1

## PRODUCT IDENTIFICATION AND MANUFACTURE

**SUPPLIER:** METPREP LTD.  
CURRIERS CLOSE  
CHARTER AVENUE  
COVENTRY CV4 8AW  
TELEPHONE: 024 7642 1222  
FAX: 024 7642 1192

**DESCRIPTION:** Type – Low Concentration

**PRODUCT:** Diamond Cut-Off Wheel

## SECTION 2

## SUBSTANCE HAZARD IDENTIFICATION

### Classification of the chemical in accordance with CFR 1910.1200(d)(f):

Signal Word: Not applicable

GHS Class: Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Hazard Statements: Not applicable.

Precautionary Statements: Not applicable.

### Hazards not otherwise classified that have been identified during the classification process:

Route of Exposure: Eyes. Skin. Inhalation. Ingestion.

Eye: Causes eye irritation

Skin: Causes skin irritation

Inhalation: Prolonged or excessive inhalation may cause respiratory tract irritation.

Ingestion: May be harmful if swallowed. May cause vomiting.

Chronic Health Effects: Prolonged or repeated contact may cause skin irritation.

Signs/Symptoms: Over exposure may cause headaches and dizziness.

Target Organs: Eyes. Skin. Respiratory system. Digestive system.

Aggravation of Pre-Existing Conditions: None generally recognized.



### SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

#### Mixtures:

Chemical Name	CAS#	Ingredient Percent	EC Num.
Iron	7439-89-6	30 – 60 by weight	231-096-4
Silicon	7440-21-3	1 – 5 by weight	231-130-8
Zinc oxide	1314-13-2	5 – 10 by weight	215-222-5
Copper	7440-50-8	1 – 5 by weight	231-159-6
Nickel	7440-02-0	1 – 5 by weight	231-111-4
Tungsten	7440-33-7	5 – 10 by weight	231-143-9
Chromium	7440-47-3	5 – 10 by weight	231-157-5
Lead	7439-92-1	0 – 1 by weight	231-100-4
Cobalt	7440-48-4	5 – 10 by weight	231-158-0
Diamond	7782-40-3	<= 1 by weight	

### SECTION 4 FIRST AID MEASURES

#### Description of necessary measures:

- Eye Contact: Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Remove contacts if present and easy to do. Continue rinsing. Get medical attention, if irritation or symptoms of overexposure persists.
- Skin Contact: Immediately wash skin with soap and plenty of water. Get medical attention if irritation develops or persists.
- Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
- Ingestion: If swallowed, do NOT induce vomiting. Call a physician or poison control centre immediately. Never give anything by mouth to an unconscious person.

#### Most important symptoms/effects, acute and delayed.

Other First Aid: Not applicable.

#### Indication of immediate medical attention and special treatment needed:

Note to Physicians: Not applicable.



## SECTION 5 FIRE FIGHTING MEASURES

### Suitable and unsuitable extinguishing media:

Suitable Extinguishing Media: Use alcohol resistant foam, carbon dioxide, dry chemical or water fog or spray when fighting fires involving this material.

Unsuitable extinguishing media: Not applicable.

### Specific hazards arising from the chemical:

Hazardous Combustion Byproducts: Not applicable.

Unusual Fire Hazards: Not applicable.

### Special protective equipment and precautions for fire-fighters:

Protective Equipment: As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.

Fire Fighting Instructions: Not applicable.

### **NFPA Ratings:**

NFPA Health: 1  
NFPA Flammability: 1  
NFPA Reactivity: 0

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures:

Personal Precautions: Evacuate area and keep unnecessary and unprotected personnel from entering the spill area. Use proper personal protective equipment as listed in Section 8.

### Environmental precautions:

Environmental Precautions: Avoid runoff into storm sewers, ditches and waterways.

### Methods and materials for containment and cleaning up:

Spill Cleanup Measures: Not applicable.

### Methods and materials for containment and cleaning up:

Methods for containment: Contain spills with an inert absorbent material such as soil or sand. Prevent from spreading by covering, diking or other means. Provide ventilation.



Methods for cleanup: Clean up spills immediately observing precautions in the protective equipment section. Place into a suitable container for disposal. Provide ventilation. After removal, flush spill area with soap and water to remove trace residue.

Reference to other sections:

Other Precautions: Not applicable.

**SECTION 7 HANDLING AND STORAGE**

Precautions for safe handling:

Handling: Use with adequate ventilation. Avoid breathing vapor and contact with Eyes, skin and clothing.

Hygiene Practices: Wash thoroughly after handling. Avoid contact with eyes and skin. Avoid Inhaling vapor or mist.

Conditions for safe storage, including any incompatibilities:

Storage: Store in a cool, dry, well ventilated area away from sources of heat, combustible materials and incompatible substances. Keep container tightly closed when not in use.

**SECTION 8 EXPOSURE CONTROL/PERSONAL PROTECTION**

EXPOSURE GUIDELINES:

Ingredient	Guideline OSHA	Guideline ACGIH	Quebec Canada	Ontario Canada	Alberta Canada
Iron				OEL-TWAEV: 5mg/m <sup>3</sup>	
Silicon	PEL-TWA: 15 mg/m <sup>3</sup> Total particulate/dust (T) PEL-TWA: 5 mg/m <sup>3</sup> Respirable fraction (R)		VEMP-TWA: 10 mg/m <sup>3</sup> Total particulate/dust (T)	OEL-TWAEV; 10 mg/m <sup>3</sup> Total particulate/dust (T)	OEL-TWA: 10 mg/m <sup>3</sup>
Zinc oxide	PEL-TWA: 15 mg/m <sup>3</sup> Total particulate/dust (T) PEL-TWA: 5 mg/m <sup>3</sup> Respirable fraction (R)	TLV-TWA: 2 mg/m <sup>3</sup> Respirable fraction (R) TLV-STEL: 10mg/m <sup>3</sup> Respirable fraction (R)	VEMP-TWA: 10 mg/m <sup>3</sup> Total particulate/dust (T) VEMP-TWA: 5mg/m <sup>3</sup>	OEL-TWAEV: 2 mg/m <sup>3</sup> Respirable fraction (R) OEL-TWAEV: 10 mg/m <sup>3</sup> Total particulate/dust (T)	OEL-TWA:10mg/m <sup>3</sup> OEL-TWA: 5mg/m <sup>3</sup> OEL-STEL:10mg/m <sup>3</sup>
Copper	TLV-TWA: 1 mg/m <sup>3</sup> (Dusts and/or mists as Cu) TLV-TWA:0.1 mg/m <sup>3</sup> (Fume as Cu)	TLV-TWA: 1mg/m <sup>3</sup> (Dusts and/or mists as Cu) TLV-TWA:0.2 mg/m <sup>3</sup> (Fume as Cu)	VEMP-TWA: 1 mg/m <sup>3</sup> VEMP-TWA: 0.2 mg/m <sup>3</sup>		OEL-TWA: 1 mg/m <sup>3</sup> OEL-TWA:0.2 mg/m <sup>3</sup>
Nickel	PEL-TWA: 1 mg/m <sup>3</sup> PEL-TWA: 1 mg/m <sup>3</sup> PEL-TWA: 1 mg/m <sup>3</sup>	TLV-TWA: 1.5 mg/m <sup>3</sup> Inhalable fraction (I) TLV-TWA:0.2 mg/m <sup>3</sup> Inhalable fraction (I) TLV-TWA: 0.1 mg/m <sup>3</sup> Inhalable fraction (I)	VEMP-TWA: 1 mg/m <sup>3</sup> VEMP-TWA: 1 mg/m <sup>3</sup> VEMP-TWA:0.1 mg/m <sup>3</sup>	OEL-TWAEV: 1 mg/m <sup>3</sup> Inhalable fraction (I) OEL-TWAEV: 0.2 mg/m <sup>3</sup> Inhalable fraction (I)	OEL-TWA: 1 mg/m <sup>3</sup> OEL-TWA:0.2 mg/m <sup>3</sup> OEL-TWA: 0.1 mg/m <sup>3</sup>
Tungsten		TLV-TWA: 5 mg/m <sup>3</sup> TLV-TWA: 5 mg/m <sup>3</sup> TLV-TWA: 1 mg/m <sup>3</sup> TLV-STEL:10mg/m <sup>3</sup> TLV-STEL:10mg/m <sup>3</sup> TLV-STEL: 3mg/m <sup>3</sup>	VEMP-TWA: 5 mg/m <sup>3</sup> VEMP-TWA: 1 mg/m <sup>3</sup> VEMP-STEL:10mg/m <sup>3</sup> VEMP-STEL: 3mg/m <sup>3</sup>		OEL-TWA: 5mg/m <sup>3</sup> OEL-TWA: 5mg/m <sup>3</sup> OEL-TWA: 1mg/m <sup>3</sup> OEL-STEL:10mg/m <sup>3</sup> OEL-STEL:10mg/m <sup>3</sup> OEL-STEL: 3mg/m <sup>3</sup>



Chromium	PEL-TWA: 1 mg/m <sup>3</sup> as Cr metal PEL-TWA: 0.5 mg/m <sup>3</sup> as Cr (III) PEL-TWA:0.005 mg/m <sup>3</sup> as Cr (VI)	TLV-TWA:0.5 mg/m <sup>3</sup> as Cr metal TLV-TWA:0.5 mg/m <sup>3</sup> as Cr (III) TLV-TWA:0.01 mg/m <sup>3</sup> as Cr (VI)	VEMP-TWA: 0.5 mg/m <sup>3</sup> VEMP-TWA: 0.01 mg/m <sup>3</sup> VEMP-TWA:0.05 mg/m <sup>3</sup> Sensitizer: Sen Sensitizer: Sen	OEL-TWAEV: 0.01 mg/m <sup>3</sup>	OEL-TWA: 0.5 mg/m <sup>3</sup> OEL-TWA: 0.5 mg/m <sup>3</sup> OEL-TWA: 0.5 mg/m <sup>3</sup> OEL-TWA:0.01 mg/m <sup>3</sup> OEL-TWA:0.05 mg/m <sup>3</sup> OEL-STEL: 1.5 mg/m <sup>3</sup> OEL-STEL: 1.5 mg/m <sup>3</sup>
Lead	PEL-TWA: 0.05 mg/m <sup>3</sup>	TLV-TWA: 0.05 mg/m <sup>3</sup>	VEMP-TWA: 0.15 mg/m <sup>3</sup>	OEL-TWAEV: 0.05 mg/m <sup>3</sup>	OEL-TWA: 0.05 mg/m <sup>3</sup>
Cobalt	PEL-TWA: 0.1 mg/m <sup>3</sup>	TLV-TWA: 0.02 mg/m <sup>3</sup> TLV-TWA: 0.02 mg/m <sup>3</sup>	VEMP-TWA: 0.02 mg/m <sup>3</sup> VEMP-TWA: 0.02	OEL-TWAEV: 0.02 mg/m <sup>3</sup>	OEL-TWA: 0.05 mg/m <sup>3</sup>
<b>Ingredient</b>	<b>Mexico</b>	<b>British Columbia Canada</b>			
Silicon	LMPE-PPT: 10 mg/m <sup>3</sup> LMPE-CT: 20 mg/m <sup>3</sup>				
Zinc oxide	LMPE-PPT: 10 mg/m <sup>3</sup> LMPE-PPT: 5mg/m <sup>3</sup> LMPE-CT: 10mg/m <sup>3</sup>	OEL-TWA: 2 mg/m <sup>3</sup> Respirable fraction (R) OEL-STEL: 10 mg/m <sup>3</sup> Respirable fraction (R)			
Copper	LMPE-PPT: 1 mg/m <sup>3</sup> LMPE-PPT:0.2mg/m <sup>3</sup> LMPE-CT: 2mg/m <sup>3</sup> LMPE-CT: 2mg/m <sup>3</sup>	OEL-TWA: 1 mg/m <sup>3</sup> OEL-TWA:0.2 mg/m <sup>3</sup>			
Nickel	LMPE-PPT: 1mg/m <sup>3</sup> LMPE-PPT:0.1mg/m <sup>3</sup> LMPE-CT: 0.3mg/m <sup>3</sup>	OEL-TWA:0.05 mg/m <sup>3</sup> OEL-TWA: 0.05 mg/m <sup>3</sup> OEL-TWA: 0.05 mg/m <sup>3</sup>			
Tungsten	LMPE-PPT: 5mg/m <sup>3</sup> LMPE-PPT: 1mg/m <sup>3</sup> LMPE-CT: 10mg/m <sup>3</sup> LMPE-CT: 3mg/m <sup>3</sup>	OEL-TWA: 5 mg/m <sup>3</sup> OEL-TWA: 5mg/m <sup>3</sup> OEL-TWA: 1mg/m <sup>3</sup> OEL-STEL: 10mg/m <sup>3</sup> OEL-STEL: 10mg/m <sup>3</sup> OEL-STEL: 3mg/m <sup>3</sup>			
Chromium	LMPE-PPT: 0.5 mg/m <sup>3</sup> LMPE-PPT: 0.5 mg/m <sup>3</sup> LMPE-PPT: 0.01 mg/m <sup>3</sup> LMPE-PPT: 0.05 mg/m <sup>3</sup> LMPE-PPT: 0.01 mg/m <sup>3</sup> LMPE-PPT: 0.05 mg/m <sup>3</sup>	OEL-TWA: 0.5mg/m <sup>3</sup> OEL-TWA: 0.5mg/m <sup>3</sup> OEL-TWA: 0.01 mg/m <sup>3</sup> OEL-TWA: 0.02 mg/m <sup>3</sup> OEL-Ceiling/Peak: 0.1 mg/m <sup>3</sup>			
Lead	LMPE-PPT: 0.15 mg/m <sup>3</sup>	OEL-TWA: 0.05 mg/m <sup>3</sup> OEL-TWA:0.05 mg/m <sup>3</sup>			
Cobalt	LMPE-PPT: 0.1 mg/m <sup>3</sup>	OEL-TWA: 0.02 mg/m <sup>3</sup> OEL-TWA: 0.02 mg/m <sup>3</sup>			

**Appropriate engineering controls:**

**Engineering Controls:**

Use appropriate engineering control such as process enclosures, local exhaust ventilation, , or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which Performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.



**Individual protection measures:**

- Eye/Face Protection:** Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
- Skin Protection Description:** Chemical-resistant gloves and chemical goggles, face-shield and synthetic apron or coveralls should be used to prevent contact with eyes, skin or clothing.
- Respiratory Protection:** A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
- Other Protective:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

<b>SECTION 9</b>	<b>PHYSICAL AND CHEMICAL PROPERTIES</b>
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**PHYSICAL AND CHEMICAL PROPERTIES**

- Physical State Appearance: Solid article
- Color: Not determined.
- Odor: Odorless.
- Odor Threshold: Not determined.
- Boiling Point: Not determined.
- Melting Point: Not determined.
- Density: Not determined.
- Solubility: Not determined.
- Vapor Density: Not determined.
- Vapor Pressure: Not determined.
- Evaporation Rate: Not determined.
- pH: Not determined.
- Viscosity: Not determined.
- Coefficient of Water/Oil Distribution: Not determined.
- Flammability: Not determined.
- Flash Point: None.



Lower Flammable/Explosive Limit: Not applicable

Upper Flammable/Explosive Limit: Not applicable

Auto Ignition Temperature: Not applicable

Explosive Properties: Excessive dust accumulation could present a potential combustible dust hazard.

VOC Content: Not determined.

**SECTION 10 STABILITY AND REACTIVITY PROPERTIES**

Reactivity:

Reactivity: Not applicable

Chemical Stability:

Chemical Stability: Stable under normal temperatures and pressures.

Possibility of hazardous reactions:

Hazardous Polymerization: Not reported.

Conditions To Avoid:

Conditions to Avoid: Heat, flames, incompatible materials and freezing or temperatures Below 32 deg. F.

Incompatible Materials:

Incompatible Materials: Oxidizing agents. Strong acids and alkalis.

Hazardous Decomposition Products:

Special Decomposition Products: Not applicable.

**SECTION 11 TOXICOLOGICAL INFORMATION**

Acute Toxicity: This product has not been tested for its toxicity.

Carcinogens:							
	ACGIH	NIOSH	OSHA	IARC	NTP		MEXICO
Nickel	A5 – Not Suspected as a Human Carcinogen as Ni element	NIOSH Carcinogen	No Data	Group 2B – Possibly carcinogenic to humans	RAC – Reasonably anticipated to be a human carcinogen.		



**Iron:**

RTECS Number: N08225000

**Silicon:**

RTECS Number: VW0400000

Eye: Eye – Rabbit Standard Draize test. 3 mg (RTECS)

Ingestion: Oral – Rat LD50: 3160 mg/kg (Details of toxic effects not reported other than lethal dose value) (RTECS)

**Zinc Oxide :**

RTECS Number : ZH4817000

**Copper :**

RTECS Number: GL7440000

**Nickel :**

RTECS Number: QR6555000

**Tungsten :**

RTECS Number: YO7175000

Eye: Eye – Rabbit Standard Draize test: 500 mg/24H (RTECS)

Skin: Administration onto the skin – Rabbit Standard Draize test. 500 mg/24H (RTECS)

**Chromium :**

RTECS Number: GB4200000

**Lead :**

RTECS Number: OF7525000

**Cobalt :**

RTECS Number: GG0375000

**SECTION 12**

**ECOLOGICAL INFORMATION**

**Ecotoxicity:**

Ecotoxicity: Please contact the phone number or address of the manufacturer listed in Section 1 for information on ecotoxicity.





**SECTION 13 DISPOSAL CONSIDERATIONS**

Description of waste:

Waste Disposal: Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.

**SECTION 14 TRANSPORT INFORMATION**

UN number: Not regulated as hazardous material for transportation.  
 UN proper shipping name: Not regulated as hazardous material for transportation.  
 Transport hazard class(es): Not regulated as hazardous material for transportation.  
 Packing group: Not regulated as hazardous material for transportation.  
 Environmental hazards: Not regulated as hazardous material for transportation.  
 Special precautions for user: Not regulated as hazardous material for transportation.

**SECTION 15 REGULATORY INFORMATION**

Safety, health & environmental regulations specific for the product.

**Inventory Status**

	<b>Canada DSL</b>	<b>TSCA Inventory Status</b>			
<b>Iron</b>	<b>Listed</b>	<b>Listed</b>			
<b>Silicon</b>	<b>Listed</b>	<b>Listed</b>			
<b>Zinc oxide</b>	<b>Listed</b>	<b>Listed</b>			
<b>Copper</b>	<b>Listed</b>	<b>Listed</b>			
<b>Nickel</b>	<b>Listed</b>	<b>Listed</b>			
<b>Tungsten</b>	<b>Listed</b>	<b>Listed</b>			
<b>Chromium</b>	<b>Listed</b>	<b>Listed</b>			
<b>Lead</b>	<b>Listed</b>	<b>Listed</b>			
<b>Cobalt</b>	<b>Listed</b>	<b>Listed</b>			



**Zinc oxide:**

Canada IDL: Identified under the Canadian Hazardous Products Act Ingredient Disclosure List:0.1%  
1717 (1326)

Section 313: EPCRA – 40 CFR Part 372 – (SARA Title III) Section 313 Listed Chemical.

**Copper :**

Canada IDL: Identified under the Canadian Hazardous Products Act Ingredient Disclosure List 0.1%

Section 313: EPCRA – 40 CFR Part 372 – (SARA Title III) Section 313 Listed Chemical.

**Nickel :**

Canada IDL: Identified under the Canadian Hazardous Products Act Ingredient Disclosure List: 0.1%  
1126 (1193)

CA PROP 65: Listed: cancer

Section 313: EPCRA – 40 CFR Part 372 – (SARA Title III) Section 313 Listed Chemical.

**Tungsten :**

Canada IDL: Identified under the Canadian Hazardous Products Act Ingredient Disclosure List: 0.1%  
1664 (1703)

**Chromium :**

Canada IDL: Identified under the Canadian Hazardous Products Act Ingredient Disclosure List: 0.1%  
399 (561)

Section 313: EPCRA – 40 CFR Part 372 – (SARA Title III) Section 313 Listed Chemical.

**Lead:**

Canada IDL: Identified under the Canadian Hazardous Products Act Ingredient Disclosure List: 0.1%  
937(1435)

Section 313: EPCRA – 40 CFR Part 372 – (SARA Title III) Section 313 Listed Chemical

**Cobalt :**

Canada IDL: Identified under the Canadian Hazardous ProductS Act Ingredient Disclosure List 0.1%  
417(566)

CA PROP 65: Listed: cancer

Section 313: EPCRA – 40 CFR Part 372 – (SARA Title III) Section 313 Listed Chemical.

**Iron**

EC Number: 231-096-4

**Silicon**

EC Number: 231-130-8



**Zinc oxide:**

EC Number 215-222-5

**Copper:**

EC Number: 231-159-6

**Nickel:**

EC Number: 231-111-4

**Tungsten:**

EC Number: 231-143-9

**Chromium:**

EC Number: 231-157-5

**Lead:**

EC Number: 231-100-4

**Cobalt:**

EC Number: 231-158-0

**State Right To Know**

	<b>RI</b>	<b>NY</b>	<b>MN</b>	<b>MI</b>	<b>IL</b>
Copper				Listed	
Nickel	Listed	Listed	Listed		Listed

	<b>PA</b>	<b>MA</b>	<b>NJ</b>		
Silicon	Listed	Listed			
Zinc oxide	Listed	Listed			
Copper	Listed	Listed Massachusetts Oil: and Hazardous List	Listed: NJ Hazardous List: Substance Number: 0528		
Nickel	Listed	Listed: Massachusetts Oil And Hazardous List	Listed: NJ Hazardous List; Substance Number: 1314		
Tungsten	Listed	Listed			
Chromium	Listed	Listed Massachusetts Oil And Hazardous List	Listed: NJ Hazardous List, Substance Number: 0432		
Lead	Listed	Listed: Massachusetts Oil and Hazardous List	Listed: NJ Hazardous List; Substance Number: 1096		
Cobalt	Listed	Listed: Massachusetts Oil And Hazardous List	Listed: NJ Hazardous List; Substance Number: 0520		

**SECTION 16****OTHER INFORMATION**HMIS Ratings:

HMIS Health Hazard:	1
HMIS Fire Hazard:	1
HMIS Reactivity:	0
SDS Creation Date:	July 27, 2011
SDS Revision Date:	March 31, 2015
MSDS Revision Notes:	GHS Update