MATERIAL SAFETY DATA SHEET

PART NUMBERS: 101260

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: Cubic Boron Nitride – High Conc

PRODUCT: Diamond Cut-off Wheels

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent	EC Num.
Iron	7439-98-6	30 – 60 by weight	231-096-4
Cubic Boron Nitride (CBN)	10043-11-5	1 – 5 by weight	233-136-6
Tin	7440-31-5	1 – 5 by weight	231-141-8
Zinc oxide	1314-13-2	5 – 10 by weight	215-222-5
Copper	7440-50-8	10 – 30 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	1 – 5 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

SECTION 3: HAZARDS IDENTIFICATION

Potential Health Effects:

Eye:	Dust may cause slight irritation.
Skin:	Dust from this product may cause temporary mechanical irritation.
Inhalation:	Dusts from this product may cause mechanical irritation of the nose, throat and respiratory tract.
Ingestion:	Ingestion of this product is unlikely. However, ingestion of product may product gastrointestinal irritation and disturbances.
Chronic Health Effects:	Chronic health effects are not expected as long as good hygiene and Proper safety precautions are practiced.

SECTION 4 FIRST AID 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. 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 dust from cutting or drilling is inhaled, remove the affected person to fresh air. If symptoms persist, get medical attention.
Ingestion:	Accidental ingestion of this material is unlikely. If this does occur, watch person for several days to make sure intestinal blockage does not occur. If symptoms persist, call a physician.
Note to Physicians:	No information available.

SECTION 5 FIRE FIGHTING MEASURES

Flammable Properties:	Non Flammable.
Flash Point:	Does not apply
Auto Ignition Temperature:	Not determined
Lower Flammable/Explosive Limit:	Not available
Upper Flammable/Explosive Limit:	Not available
Extinguishing Media:	Use any extinguishing media appropriate for the surrounding fires.
Unsuitable Media:	None.
Protective Equipment:	As in any fire, wear self-contained breathing apparatus pressure demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA Ratings:

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

SECTION 6 ACCIDENTAL RELEASE MEASURES

Methods for containment:	Containment of this material should not be necessary.
Methods for cleanup:	Shovel or sweep up for re-use or disposal. Avoid creating dusty conditions. Evaluate residue to determine if it is a hazardous waste by characteristic. Dispose of in accordance with Local, Federal and Provincial Regulations.

SECTION 7 HANDLING AND STORAGE

Handling:	Always HANDLE AND STORE wheels in a CAREFUL manner. Always VISUALLY INSPECT all wheels before mounting. Always CHECK MACHINE SPEED against the established maximum Safe operating speed MARKED ON THE WHEEL.
Storage:	No special storage conditions required.
Hygiene Practices:	Wear suitable gloves and eye/face protection.

SECTION 8 EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering Controls:	General dilution ventilation and/or local exhaust ventilation Should be provided as necessary to maintain exposures below occupational exposure limits.
Eye/Face Protection:	Always WEAR SAFETY GLASSES or some type of eye protection when grinding.
Skin Protection Description:	Protective gloves. Long sleeved shirt and long pants.
Respiratory Protection:	When workers are facing airborne particulate/dust concentrations above the exposure limit they must use appropriate certified respirators. A properly fitted NIOSH approved disposable N 95 type dust Respirator or better is recommended.
Other Protective:	Use of this product may create elevated sound levels. Hearing protection should be worn where required. (see OSHA 29 CFR 1910.134 and other applicable regulations).
General Hygiene Considerations:	Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Avoid getting dust into boots and gloves through wrist bands and pant tucks.

EXPOSURE GUIDELINES

Ingredient	Guideline OSHA	Guideline ACGIH	Quebec Canada	Ontario Canada	Alberta Canada
Iron				OEL-TWAEV: 5mg/m³	
Tin	PEL-TWA: 2 mg/m³	TLV-TWA: 2 mg/m³	VEMP-TWA: 2 mg/m³		OEL-TWA:2mg/m³
Zinc oxide	PEL-TWA:15mg/m³ Total particulate/dust (T) PEL-TWA: 5 mg/m³ Respirable fraction (R) PEL-TWA: 5mg/m³	TLV-TWA: 2 mg/m³ Respirable fraction (R) TLV-STEL: 10 mg/m³ Respirable fraction (R)	VEMP-TWA: 10 mg/m³ Total particulate/dust (T) VEMP-TWA: 5mg/m³	OEL-TWAEV: 2 mg/m³ Respirable fraction (R) OEL-TWAEV: 10 mg/m³ Total particulate/dust (T)	OEL-TWA:10mg/m³ OEL-TWA: 5mg/m³ OEL-STEL:10mg/m³
Copper	TLV-TWA: 1 mg/m³ (Dusts and/or mists as Cu) TLV-TWA: 0.1 mg/m³ (Fume as Cu)	TLV-TWA: 1 mg/m³ (Dusts and/or mists as Cu) TLV-TWA: 0.2 mg/m³ (Fume as Cu)	VEMP-TWA: 1 mg/m³ VEMP-TWA: 0.2 mg/m³		OEL-TWA: 1 mg/m³ OEL-TWA:0.2mg/m³
Nickel	PEL-TWA: 1 mg/m³ PEL-TWA: 1 mg/m³ PEL-TWA: 1 mg/m³	TLV-TWA: 1.5 mg/m³ Inhalable fraction (I) TLV-TWA: 0.2 mg/m³ Inhalable fraction (I) TLV-TWA: 0.1 mg/m³ Inhalable fraction (I)	VEMP-TWA: 1 mg/m³ VEMP-TWA: 1 mg/m³ VEMP-TWA: 0.1 mg/m³	OEL-TW AEV: 1 mg/m³ Inhalable fraction (I) OEL-TWAEV: 0.2 mg/m³ Inhalable fraction (I)	OEL-TWA: 1 mg/m³ OEL-TWA: 0.2 mg/m³ OEL-TWA: 0.1 mg/
Tungsten		TLV-TWA : 5 mg/m³ TLV-TWA: 5 mg/m³ TLV-TWA: 1 mg/m³ TLVSTEL:10 mg/m³ TLV-STEL:10 mg/m³ TLV-STEL: 3 mg/m³	VEMP-TWA: 5 mg/m³ VEMP-TWA: 1 mg/m³ VEMPSTEL:10mg/m³ VEMP-STEL: 3mg/m³		OEL-TWA: 5 mg/m³ OEL-TWA: 5 mg/m³ OEL-TWA: 1 mg/m³ OEL-TEL: 10 mg/m³ OEL-STEL:10mg/m³ OEL_STEL: 3mg/m³
Chromium	PEL-TWA: 1 mg/m³ as Cr metal PEL-TWA: 0.5 mg/m³ as Cr (III) PEL-TWA: 0.005 mg/m3 as Cr (VI)	TLV-TWA: 0.05 mg/m³ as Cr metal TLV-TWA: 0.5 mg/m³ as Cr (III) TLV-TWA: 0.01 mg/m³ as Cr (VI)	VEMP-TWA: 0.05 mg/m³ VEMP-TWA: 0.01 mg/m³ VEMP-TWA: 0.05 mg/m³ Sensitizer: Sen Sensitizer: Sen	OEL-TWAEV: 0.01 mg/m³	OEL_TWA:0.05mg/m³ OEL-TWA: 0.5 mg/m3 OEL-TWA: 0.5 mg/m³ OEL-TWA:0.01mg/m³ OEL-TWA:0.05mg/m³ OEL-STEL:1.5mg/m³ OEL-STEL:1.5mg/m³
Lead	PEL-TWA: 0.05 mg/m³	TLV-TWA: 0.05 mg/m³	VEMP-TWA: 0.15 mg/m³	OEL-TWAEV: 0.05 mg/m³	OEL-TWA: 0.05 mg/m³
Cobalt	PEL-TWA: 0.1 mg/m³	TLV-TWA: 0.02 mg/m³ TLV-TWA: 0.02 mg/m³	VEMP-TWA: 0.02 mg/m³ VEMP-TWA: 0.02 mg/m³	OEL-TWAEV: 0.02 mg/m³	OEL-TWA: 0.05 mg/m³ OEL-TWA:0.05mg/m³
Ingredient	**Mexico**	**British Columbia Canada**			
Tin	LMPE-PPT: 2 mg/m³ LMPE-CT: 4 mg/m³	OEL-TWA: 2 mg/m³			
Zinc oxide	LMPE-PPT:10mg/m³ LMPE-PPT: 5mg/m³ LMPE-CT: 10mg/m³	OEL-TWA: 2 mg/m³ Respirable fraction (R) OEL-STEL:10 mg/m³ Respirable fraction (R)			
Copper	LMPE-PPT: 1 mg/m³ LMPE-PPT: 0.2 mg/m³ LMPE-CT: 2 mg/m³ LMPE-CT: 2 mg/m³	OEL-TWA: 1 mg/m³ OEL-TWA:0.2mg/m³			
Nickel	LMPE-PPT:1 mg/m³ LMPE-PPT:0.1 mg/m³ LMPE-CT: 0.3 mg/m³	OEL-TWA:0.05 mg/m³ OEL-TWA: 0.05 mg/m³ OEL-TWA: 0.05 mg/m³			
Tungsten	LMPE-PPT: 5 mg/m³ LMPE-PPT: 1 mg/m³ LMPE-CT: 10 mg/m³ LMPE-CT: 3 mg/m³	OEL-TWA: 5 mg/m³ OEL-TWA: 5 mg/m³ OEL-TWA: 1 mg/m³ OEL-STEL:10mg/m³ OEL-STEL:10mg/m³ OEL-STEL: 3mg/m³			

Chromium	LMPE-PPT:0.5 mg/m³ LMPE-PPT: 0.5 mg/m³ LMPE-PPT: 0.01 mg/m³ LMPE-PPT: 0.05 mg/m³ LMPE-PPT: 0.01 mg/m³ LMPE-PPT: 0.05 mg/m³	OEL-TWA: 0.5 mg/m³ OEL-TWA:0.5 mg/m³ OEL-TWA:0.01mg/m³ OEL-TWA:0.02 mg/m³ OEL-Ceiling/Peak:0.1 mg/m³			
Lead	LMPE-PPT: 0.15 mg/m³	OEL-TWA: 0.05 mg/m³ OEL-TWA: 0.05 mg/m³			
Cobalt	LMPE-PPT: 0.1 mg/m³	OEL-TWA: 0.02 mg/m³ OEL-TWA: 0.02 mg/m³			

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical State Appearance: **Solid article**

Odor: **Odorless**

Flash point: **Does not apply**

Auto Ignition Temperature: **Not determined**

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions.

Hazardous Polymerization: Hazardous polymerization does not occur.

Conditions to Avoid: Keep away from heat, sparks or open flame.

Special Decomposition Products: In use, dust and decomposing odors may be generated. In Most cases, the material removed from the workplace will be Significantly greater than the grinding wheel components. Coolants may produce other decomposition products.

SECTION 11 TOXICOLOGICAL INFORMATION

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

Nickel:

ACGIH: A5 – Not Suspected as a Human Carcinogen As Ni element

NIOSH: NIOSH carcinogen

OSHA: No Data

IARC: Group 2B – Possibly carcinogenic to humans.

NTP: RAC – Reasonably anticipated to be a human carcinogen.

Iron :

RTECS Number: N08225000

Cubic Boron Nitride (CBN):

RTECS Number: ED7850000

Tin :

RTECS Number: XP7320000

Zinc oxide :

RTECS Number: ZH4817000

Copper :

RTECS Number: GL7440000

Nickel :

RTECS Number : QR6555000

Tungsten :

RTECS Number: Y07175000

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

Biodegradation: In harsh environments, metal bonded products will decay similar to their metallic components.

SECTION 13 DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Dispose of in compliance with all local and national regulations.

SECTION 14 TRANSPORT INFORMATION

DOT Shipping Name: Not regulated as hazardous material for transportation

DOT UN Number: Not regulated a hazardous material for transportation.

IATA Shipping Name: Not regulated as hazardous material for transportation.

Canadian Shipping Name: This product is Not Regulated under the Transportation of Dangerous Goods Act. (CAN).

SECTION 15 REGULATORY INFORMATION

Inventory Status

	Canada DSL	TSCA Inventory Status			
Iron	Listed	Listed			
Cubic Boron Nitride (CBN)	Listed	Listed			
Tin	Listed	Listed			
Zinc oxide	Listed	Listed			
Copper	Listed	Listed			
Nickel	Listed	Listed			
Tungsten	Listed	Listed			
Chromium	Listed	Listed			
Lead	Listed	Listed			
Cobalt	Listed	Listed			

SECTION 16 OTHER INFORMATION

HMIS Ratings:

HMIS Health Hazard: **1**

HMIS Fire Hazard **0**

HMIS Reactivity **0**

HMIS Personal Protection: **X**

SDS Creation : **July 27, 2011**

SDS Revision Date: **July 01, 2013**