SECTION 1. IDENTIFICATION

1-1 Product identification

Vacuum brazed diamond blades

1-2 Recommended use

Cutting and machining of steel and other materials

1-3 Company/undertaking identification

Manufacturer : CS Unitec, Inc.
E-Mail : **info@csunitec.com**
Phone : **203-853-9522 | 800-700-5919**
Address : **22 Harbor Ave, Nowalk, CT 06850 | 4330 Center St, Deer Park, TX 77536**

SECTION 2. HAZARDS IDENTIFICATION

EHWA vacuum brazed diamond blades are manufactured from metals into solid, stable and inert blades, and are coated with a water-based paint(s). Under normal cutting conditions, the vacuum brazed diamond blades are considered to be articles in that they do not release more than very small quantities of hazardous chemicals and do not cause physical or health hazards as defined in the OSHA Hazard Communication Standard. Hazardous chemicals may be released if the blades are welded, cut, melted or otherwise physically altered.

This MSDS was prepared to address the potential for exposure to dust and/or fume generated from the diamond blades. Beyond the scope of this MSDS, the material being cut may contain hazardous chemicals and therefore needs to be evaluated with effective controls instituted to prevent exposure.

The actual composition of the diamond blades varies depending on the type of vacuum brazed diamond blades and the grade of steel.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient name	CAS number	% by Wt
BODY MATERIAL (STEEL)	-	
DIAMOND	7782-40-3	It is composed depend on product groups.
NICKEL	7440-02-0	
COBALT	7440-48-4	
BORON	7440-42-8	
CHROMIUM	7440-47-3	
SILICON	7440-21-3	

SECTION 4. FIRST AID MEASURES

4-1 Description of first aid measures

Inhalation

If symptoms develop (coughing, wheezing, shortness of breath, etc.), remove from exposure and obtain medical assistance, as needed.

Skin contact

If irritation occurs, wash affected areas with soap and water. Obtain medical assistance, as needed.

Eye contact

If irritation occurs, flush with large amounts of water. Obtain first aid and medical assistance, as needed.

Ingestion

Obtain medical assistance.

4-2 Most important symptoms and effects, both acute and delayed

Refer to Section 11.1. Information on toxicological effects.

4-3 Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5. FIRE FIGHTING MEASURES

5-1 Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5-2 Special hazards arising from the substance or mixture

No inherent in this product.

5-3 Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6-1 Personal precautions

Not applicable

6-2 Environmental precautions

Not applicable

6-3 Methods for cleaning up

Not applicable

SECTION 7. HANDLING AND STORAGE

7-1 **handling**

Advices on safe handling:

For industrial or professional use only.
Do not handle until all safety precautions have been read and understood.
Avoid breathing of dust created by cutting or machining.
Check product for damage such as cracks or nicks prior to use. Replace if damaged.
(Damaged product can break apart during use and cause serious injury to face or eyes.)
Always wear eye and face protection when working at cutting operations.
Keep a safe distance when working at cutting operations.
Use personal protective equipment (gloves, respirators, etc.) as required.
Do not eat, drink or smoke when using this product.
Contaminated work clothing should not be allowed out of the workplace.

7-2 Storage

Store in a dry form within doors. Avoid the sudden temperature change and the humid conditions.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8-1 Exposure limits

Ingredient	CAS number	TWA (ACGIH)	Additional Comments
BODY MATERIAL (STEEL)	-	-	
DIAMOND	7782-40-3	-	
NICKEL	7440-02-0	1.5mg/m3	
COBALT	7440-48-4	0.02mg/m3	
BORON	7440-42-8	-	
CHROMIUM	7440-47-3	0.5mg/m3	
SILICON	7440-21-3	-	

ACGIH : American Conference of Governmental Industrial Hygienists

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

8-2 Exposure controls

Engineering controls

Provide appropriate local exhaust ventilation for cutting and machining.
Use local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray.
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).
If ventilation is not adequate, use respiratory protection equipment.

Personal protective equipment (PPE)

Respiratory protection

Assess exposure concentrations of all materials involved in the work process.

Select and use appropriate respirators to prevent inhalation overexposure.

Hand protection

Select and use gloves approved to relevant local standards to prevent skin contact based on the results of an exposure assessment.

Eye/face protection

To minimize the risk of injury to face and eyes, always wear eye and face protection when working at cutting and machining operations or when near such operations.

Select and use eye/face protection to prevent contact based on the results of an exposure assessment.

The following eye/face protection(s) are recommended : Safety Glasses with side shields

Body protection

Select and use protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9-1 Appearance

Physical state	: Solid
Colour	: Solid abrasive product
Odour	: Odorless

9-2 Important health, safety and environmental information

pH (20 °C)	: Not applicable
Melting point/range (°C)	: Not applicable
Boiling point/range (°C)	: Not applicable
Flash point (°C)	: Not applicable
Ignition temperature (°C)	: Not applicable
Vapour pressure (°C)	: Not applicable
Density (g/cm3)	: Not applicable
Bulk density (kg/m3)	: Not applicable
Water solubility (20°C in g/l)	: Not applicable
Partition coefficient	: Not applicable
n-Octanol/Water (log Po/w)	: Not applicable
Viscosity, dynamic (mPa s)	: Not applicable
Dust explosion hazard	: Not applicable
Explosion limits	: Not applicable

SECTION 10. STABILITY AND REACTIVITY

10-1 Conditions to avoid
None known

10-2 Materials to avoid
None known

10-3 Hazardous decomposition products
None known

SECTION 11. TOXICOLOGICAL INFORMATION

11-1 Information on toxicological effects

Acute toxicity
Not applicable

boron (7440-42-8)	
LD50 oral rat	> 2,000 mg/kg
Method	OECD Test Guideline 423
Chromium (7440-47-3)	
LD50	> 5000 mg/kg Rat
nickel (7440-02-0)	
LD50 oral rat	> 9000 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value)
cobalt (7440-48-4)	
LD50 oral rat	> 5000 mg/kg (Rat)
Silicon (7440-21-3)	
LD50	3160 mg/kg Rat

Skin corrosion/irritation
Not applicable

Serious eye damage/irritation
Not applicable.

Respiratory or skin sensitization
Not applicable.

Germ cell mutagenicity
Not applicable.

Carcinogenicity
Not applicable.

nickel (7440-02-0)	
IARC group	2B
National Toxicology Program (NTP) Status	3

cobalt (7440-48-4)	
IARC group	2B

Reproductive toxicity

Not applicable.

Specific target organ toxicity (single exposure)

Not applicable.

Specific target organ toxicity (repeated exposure)

Not applicable.

Aspiration hazard

Not applicable.

Potential adverse human health effects and symptoms

Irritation: may cause irritation to the respiratory system..

Symptoms/injuries after inhalation

May cause respiratory irritation.

Symptoms/injuries after eye contact

May cause severe irritation.

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)
Chromium (7440-47-3)	
LC0 (Danio rerio (zebra fish))	>= 1 mg/l Exposure time: 96 h Test Method: static test Analytical monitoring: no Test substance: Boron amorphous Method: Directive 67/548/EEC, Annex V, C.1. GLP: yes No toxicity at the limit of solubility Fresh water
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])

12-2 Persistence and Degradability

Chromium (7440-47-3)

Persistence	log Kow 0.23.
boron (7440-42-8)	
Persistence	The methods for determining biodegradability are not applicable to inorganic substances.
Silicon (7440-21-3)	
Persistence	log Kow 57 ~ 77 (OECD Guideline 117)

12-3 Bioaccumulative Potential

Cobalt (7440-48-4)	
BCF fish 1	(no bioaccumulation)
boron (7440-42-8)	
Persistence	This substance is not considered to be persistent, bioaccumulating and toxic (PBT).
Chromium (7440-47-3)	
Bioaccumulative Potential	Oncorhynchus mykiss (rainbow trout) - 30 d - 50 µg/l(Chromium) Bioconcentration factor (BCF): 1.03 - 1.22
Silicon (7440-21-3)	
Bioaccumulative Potential	BCF 77 ~ 99 (OECD Guideline 301 A, GLP)

12-4 Mobility in Soil

No additional information available

12-5 Other Adverse Effects

Other Information : Avoid release to the environment

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SECTION 13. DISPOSAL CONSIDERATIONS

Dispose of contents/ container in accordance with the local/regional/national/international regulations.
The substrate that was abraded must be considered as a factor in the disposal method for this product.
Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility.

SECTION 14. TRANSPORT INFORMATION

No specific regulations for transportation are required.

SECTION 15. REGULATORY INFORMATION

15.1 International regulations

EU-Regulations	No additional information available
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Not classified

National regulations	No additional information available

15.2 US Federal regulations

SARA Section 311/312 Hazard Categories

Components	C.A.S. #	
Cobalt	7440-48-4	Immediate (acute) health hazard Delayed (chronic) health hazard
Nickel	7440-02-0	Immediate (acute) health hazard Delayed (chronic) health hazard
Boron	7440-42-8	Immediate (acute) health hazard Delayed (chronic) health hazard

SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372 (Toxic Chemical Release Reporting):

Components	C.A.S. #	WT %
Cobalt	7440-48-4	≤0.1
Nickel	7440-02-0	≤0.1

15.3 US State regulations

California Proposition 65: WARNING You create dust when you cut, sand, drill or grind materials such as wood, paint, cement, masonry or metal. This dust often contains chemicals known to cause cancer, birth defects or other reproductive harm.

SECTION 16. OTHER INFORMATION

SDS revision date: 18-Mar-2022

Reason for update: Mandated update

Disclaimer
The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. Company makes no warranties, expressed or implied, including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose or course of performance or usage of trade. User is responsible for determining whether the product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.