

Diamond impregnated segments

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Date of issue: 12/21/2015

Revision date: 12/21/2015

Supersedes: 12/15/2015

Version: 1.1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	Article
Name	DG-CW, DC-D, DC-TP, DC-UE, DD-X, DS-BB, DS-CP
Product code	BU Diamond

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

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier	Department issuing data specification sheet
Hilti (Canada) Corp. 2360 Meadowpine Boulevard L5N 6S2 Mississauga, Ontario - Canada T +1905 8139200 1-800-363-4458 toll free - F +1 905 813 9009	Hilti Entwicklungsgesellschaft mbH Hiltistrasse 6 86916 Kaufering - Deutschland T +49 8191 906310 - F +49 8191 90176310 anchor.hse@hilti.com

1.4. Emergency telephone number

Emergency number	Chem-Trec Tel.: 1 800 424 9300 (USA, PR, Virgin Islands, Canada) Tel.: 703 527 3887 (Other countries)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-CA)

Not classified

2.2. Label elements

According to EC directives or the corresponding national regulations there is no labelling obligation for this product.

No labelling applicable

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

Name	Product identifier	%	Classification (GHS-CA)
copper, powder	(CAS No) 7440-50-8	0.1 - 90	Hazardous to the aquatic environment — Acute Hazard, Category 1, H400 Hazardous to the aquatic environment — Chronic Hazard, Category 3, H412
iron	(CAS No) 7439-89-6	0.1 - 90	Not classified
nickel	(CAS No) 7440-02-0	0.1 - 50	Sensitisation — Skin, Category 1, H317 Carcinogenicity, Category 2, H351 Specific target organ toxicity — Repeated exposure, Category 1, H372
tungsten	(CAS No) 7440-33-7	0.1 - 50	Not classified

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Name	Product identifier	%	Classification (GHS-CA)
cobalt	(CAS No) 7440-48-4	0.1 - 30	Sensitisation — Respiratory, Category 1, H334 Sensitisation — Skin, Category 1, H317 Hazardous to the aquatic environment — Chronic Hazard, Category 4, H413
tungsten carbide	(CAS No) 12070-12-1	0.1 - 10	Carcinogenicity, Category 1B, H350 Specific target organ toxicity — Repeated exposure, Category 2, H373
chromium	(CAS No) 7440-47-3	0.1 - 5	Not classified
zinc powder - zinc dust (stabilised)	(CAS No) 7440-66-6	0.1 - 5	Hazardous to the aquatic environment — Acute Hazard, Category 1, H400 Hazardous to the aquatic environment — Chronic Hazard, Category 1, H410
Diamond	(CAS No) 7782-40-3	0.1 - 5	Not classified
tin	(CAS No) 7440-31-5	<= 3	Not classified
manganese	(CAS No) 7439-96-5	<= 2	Not classified
molybdenum	(CAS No) 7439-98-7	0.1 - 1	Hazardous to the aquatic environment — Acute Hazard, Category 1, H400
phosphorus, red	(CAS No) 7723-14-0	<= 1	Flammable solids, Category 1, H228 Hazardous to the aquatic environment — Chronic Hazard, Category 3, H412
graphite	(CAS No) 7782-42-5	0.1 - 1	Not classified

Full text of H-statements: see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	Remove person to fresh air and keep comfortable for breathing. When symptoms occur: go into open air and ventilate suspected area.
First-aid measures after skin contact	Gently wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	Rinse eyes with water as a precaution. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	Rinse mouth.

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

Symptoms/injuries after inhalation	May cause respiratory irritation.
Symptoms/injuries after eye contact	May cause severe irritation.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Water. Sand. Foam. Carbon dioxide.
Unsuitable extinguishing media	Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	Not flammable.
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5.3. Advice for firefighters

Protection during firefighting Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

No additional information available

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Scoop solid spill into closing containers.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed Normal use of this product shall imply use in accordance with the instructions on the packaging and in line with the expectations of a by professional users.

Precautions for safe handling The product should not be used for purposes other than those shown above without first referring to the supplier and obtaining written handling instructions.

Hygiene measures Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions Store in a dry place.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

copper, powder (7440-50-8)		
ACGIH	ACGIH TWA (mg/m ³)	0.2 mg/m ³ (Copper fume; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
iron (7439-89-6)		
ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³ as iron oxide dust or fume
tungsten (7440-33-7)		
ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³ (Tungsten Metal; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	ACGIH STEL (mg/m ³)	10 mg/m ³ (Tungsten Metal; USA; Short time value; TLV - Adopted Value)
nickel (7440-02-0)		
ACGIH	ACGIH TWA (mg/m ³)	1.5 mg/m ³ (Nickel Elemental; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Inhalable fraction)
cobalt (7440-48-4)		
ACGIH	ACGIH TWA (mg/m ³)	0.02 mg/m ³

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cobalt (7440-48-4)		
ACGIH	Remark (ACGIH)	Pneumonitis
OSHA	OSHA PEL (TWA) (mg/m ³)	0.1 mg/m ³
tin (7440-31-5)		
ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³ (Tin Metal; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
tungsten carbide (12070-12-1)		
ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³ (Tungsten, Insoluble compounds, as W; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	ACGIH STEL (mg/m ³)	10 mg/m ³ (Tungsten, Insoluble compounds, as W; USA; Short time value; TLV - Adopted Value)
zinc powder - zinc dust (stabilised) (7440-66-6)		
ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³
chromium (7440-47-3)		
ACGIH	ACGIH TWA (mg/m ³)	0.5 mg/m ³ (Chromium, metal; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
molybdenum (7439-98-7)		
ACGIH	ACGIH TWA (mg/m ³)	3 mg/m ³ (Molybdenum Metal; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Respirable fraction; Molybdenum Metal; 10 mg/m ³ ; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Inhalable fraction)
manganese (7439-96-5)		
ACGIH	ACGIH TWA (mg/m ³)	0.02 mg/m ³
ACGIH	Remark (ACGIH)	CNS impair; A4
graphite (7782-42-5)		
ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³ (Graphite (all forms except graphite fibers); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Respirable fraction)

8.2. Exposure controls

Appropriate engineering controls
 Personal protective equipment

Ensure good ventilation of the work station.
 Dust formation: dust mask. In case of dust production: protective goggles.



Hand protection
 Eye protection
 Skin and body protection
 Respiratory protection

Wear leather gloves.
 Safety glasses.
 Wear suitable protective clothing.
 Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.

Consumer exposure controls
 Other information

Avoid contact during pregnancy/while nursing.
 Hazardous dust of the workpiece material may be generated during grinding / drilling and/or sanding operations. National regulations for dust exposure limit values have to be taken into consideration as part of the job hazard assessment.

Most of the dust generated during grinding is from the base material being ground and the potential hazard from this exposure must be evaluated. This dust may present a fire or dust explosion hazard and may present a serious health hazard.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid
Colour	No data available
Odour	No data available
Odour threshold	No data available
pH	No data available
Relative evaporation rate (butylacetate=1)	No data available
Melting point	No data available
Freezing point	No data available
Boiling point	No data available
Flash point	No data available
Auto-ignition temperature	No data available
Decomposition temperature	> 400 °C
Flammability (solid, gas)	No data available
Vapour pressure	No data available
Relative vapour density at 20 °C	No data available
Relative density	No data available
Solubility	insoluble in water.
Log Pow	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosive properties	No data available
Oxidising properties	No data available
Explosive limits	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport. Product is not explosive.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity Not classified

iron (7439-89-6)	
LD50 oral rat	30000 mg/kg (Rat)
ATE US (oral)	30000.000 mg/kg bodyweight
tungsten (7440-33-7)	
LC50 inhalation rat (ppm)	> 5.4 ppm/4h (poeder; 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)
tin (7440-31-5)	
LD50 oral rat	> 2000 mg/kg bodyweight (Rat; OECD 423: Acute Oral Toxicity – Acute Toxic Class Method; Experimental value)
LD50 dermal rat	> 2000 mg/kg bodyweight (Rat; Experimental value; OECD 402: Acute Dermal Toxicity)
zinc powder - zinc dust (stabilised) (7440-66-6)	
LD50 oral rat	> 2000 mg/kg bodyweight (Rat; Equivalent or similar to OECD 401; Experimental value)
LD50 dermal rat	> 2000 mg/kg bodyweight (Rat; Read-across; Equivalent or similar to OECD 402)
manganese (7439-96-5)	
LD50 oral rat	9000 mg/kg (Rat)
ATE US (oral)	9000.000 mg/kg bodyweight
phosphorus, red (7723-14-0)	
LD50 oral rat	> 10000 mg/kg (Rat)
Skin corrosion/irritation	Not classified
Serious eye damage/irritation	Not classified
Respiratory or skin sensitisation	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
nickel (7440-02-0)	
IARC group	2B
National Toxicology Program (NTP) Status	3
cobalt (7440-48-4)	
IARC group	2B
tungsten carbide (12070-12-1)	
IARC group	2A
chromium (7440-47-3)	
IARC group	3
Reproductive toxicity	Not classified
Specific target organ toxicity (single exposure)	Not classified
Specific target organ toxicity (repeated exposure)	Not classified
Aspiration hazard	Not classified
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

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copper, powder (7440-50-8)	
LC50 fish 1	200 µg/l (LC50; 96 h; Salmo gairdneri; Flow-through system; Fresh water)
EC50 Daphnia 1	109 - 798 µg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Weight of evidence)
Threshold limit algae 1	230 µg/l (EC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Weight of evidence)
zinc powder - zinc dust (stabilised) (7440-66-6)	
LC50 fish 1	0.14 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Zinc ion)
EC50 Daphnia 1	0.07 mg/l (48 h; Daphnia magna; Zinc ion)
LC50 fish 2	0.169 mg/l (96 h; Oncorhynchus mykiss; Zinc ion)
EC50 Daphnia 2	1.833 mg/l (48 h; Daphnia magna; Zinc ion)
ErC50 (algae)	0.15 mg/l
Threshold limit algae 1	0.150 mg/l (72 h; Selenastrum capricornutum; Zinc ion)
Threshold limit algae 2	0.050 mg/l (72 h; Selenastrum capricornutum; Zinc ion)
molybdenum (7439-98-7)	
LC50 fish 1	0.790 mg/l (LC50; 672 h)
phosphorus, red (7723-14-0)	
LC50 fish 1	33.2 mg/l (LC50; 96 h)
EC50 Daphnia 1	10.5 mg/l (EC50; 48 h)
EC50 other aquatic organisms 1	18.3 mg/l (72 h; Scenedesmus subspicatus; Growth rate)

12.2. Persistence and degradability

copper, powder (7440-50-8)	
Persistence and degradability	Biodegradability: not applicable. Biodegradability in soil: not applicable. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
iron (7439-89-6)	
Persistence and degradability	Biodegradability: not applicable. Biodegradability in soil: not applicable. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
tungsten (7440-33-7)	
Persistence and degradability	Biodegradability: not applicable. Forming sediments in water. Biodegradability in soil: not applicable. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
nickel (7440-02-0)	
Persistence and degradability	Biodegradability: not applicable. Biodegradability in soil: not applicable. No (test) data on mobility of the substance available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
cobalt (7440-48-4)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
tin (7440-31-5)	
Persistence and degradability	Biodegradability: not applicable. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable

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ThOD	Not applicable
tungsten carbide (12070-12-1)	
Persistence and degradability	Biodegradability: not applicable. Biodegradability in soil: not applicable. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
zinc powder - zinc dust (stabilised) (7440-66-6)	
Persistence and degradability	Biodegradability: not applicable. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
chromium (7440-47-3)	
Persistence and degradability	Biodegradability: not applicable. Biodegradability in soil: not applicable. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
molybdenum (7439-98-7)	
Persistence and degradability	Biodegradability: not applicable. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
manganese (7439-96-5)	
Persistence and degradability	Biodegradability: not applicable. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
phosphorus, red (7723-14-0)	
Persistence and degradability	Biodegradability: not applicable. Biodegradability in soil: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

12.3. Bioaccumulative potential

copper, powder (7440-50-8)	
Bioaccumulative potential	Bioaccumulation: not applicable.
iron (7439-89-6)	
Log Pow	-0.77 (Estimated value)
tungsten (7440-33-7)	
Log Pow	0.23 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
nickel (7440-02-0)	
Log Pow	-0.57 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
tin (7440-31-5)	
Bioaccumulative potential	No bioaccumulation data available.
tungsten carbide (12070-12-1)	
Bioaccumulative potential	No bioaccumulation data available.
zinc powder - zinc dust (stabilised) (7440-66-6)	
Bioaccumulative potential	Bioaccumulation: not applicable.
chromium (7440-47-3)	
BCF fish 1	0.0048 (BCF)

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BCF other aquatic organisms 1	0.443 (BCF)
Bioaccumulative potential	Not bioaccumulative.
molybdenum (7439-98-7)	
BCF fish 1	260 - 500 (BCF)
Bioaccumulative potential	No bioaccumulation data available.
manganese (7439-96-5)	
BCF fish 1	81 (BCF)
BCF other aquatic organisms 1	300000 (BCF)
BCF other aquatic organisms 2	125000 (BCF)

12.4. Mobility in soil

phosphorus, red (7723-14-0)	
Ecology - soil	Not toxic to plants.

12.5. Other adverse effects

Other information Do not allow the product, as is, to spread into the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) Disposal must be done according to official regulations.
 Waste disposal recommendations Dispose in a safe manner in accordance with local/national regulations. Avoid release to the environment.
 Ecology - waste materials Avoid release to the environment. Hazardous waste due to toxicity.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	RID
14.1. UN number			
Not regulated for transport			
14.2. UN proper shipping name			
Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)			
Not applicable	Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group			
Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards			
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available			

14.6. Special precautions for user

- Overland transport

- Transport by sea

No data available

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- Air transport

No data available

- Rail transport

Carriage prohibited (RID) No

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

National/international regulations

No additional information available

SECTION 16: Other information

SDS Major/Minor	None
Date of issue	21/12/2015
Revision date	21/12/2015
Supersedes	15/12/2015

Full text of H-statements:

H228	Flammable solid
H317	May cause an allergic skin reaction
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H350	May cause cancer
H351	Suspected of causing cancer
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life

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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