

## SAFETY DATA SHEET (SDS) Cemented Carbide Product with Cobalt/Nickel/Chrome Binder

### Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

#### 1.1. Product

- 1.1.1. **Chemical Names:** Cemented Carbide Product with Cobalt/Nickel/Chrome binder
- 1.1.2. **Synonyms:** Cemented Carbide, Sintered Carbide, Hardmetal
- 1.1.3. **Chemical Family:** Refractory Metal Carbide
- 1.1.4. **Chemical Use:** Cutting tools, inserts, wear parts, tools, mill rolls, drill bits, drill rods, endmills, reamers

#### 1.2 Manufacturer

- 1.2.1 **Manufacturer Name:**  
CERATIZIT Sacramento, LP  
11312 Sunrise Gold Circle  
Rancho Cordova CA 95742  
USA  
www.promaxtools.com  
Tel: 916-638-0501  
Fax: 916-638-0512
- 1.2.2 **Emergency Phone Number:**  
916-638-0501

### Section 2: Hazards Identification

#### 2.1. Classification

##### 2.1.1. Symbol:



**2.1.2. Signal Word:** Warning

**2.1.3. Hazard Statement:** As defined in the OSHA Hazard Communication Standard, 29 CFR 1910.1200, the aforementioned products are considered articles and do not require an SDS. In addition, articles are not included in the scope of the Globally Harmonization System (GHS). As such, the GHS labeling elements are not included on this SDS. All components listed for this product are bound within the product. When handled as intended and under normal conditions of use, there is no evidence that any of the ingredients are released in amounts that pose a significant health risk. Although these products are not subject to the OSHA Standard or GHS labeling elements, CERATIZIT Sacramento, LP would like to disclose as much health and safety information as possible to ensure that this product is handled and used properly. This SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and be made available for employees and other users of this product. In addition, the recommendations for handling and use of these products should be included in worker training programs.

**2.1.4.** According to the REACH C&L Inventory, the following Hazardous Statements and Precautionary Statements are associated with the grinding of this product:

**H316:** Causes mild skin irritation

**H317:** May cause an allergic skin reaction

**H320:** Causes eye irritation

**H334:** May cause allergy or asthma symptoms or breathing difficulties if inhaled

**H335:** May cause respiratory irritation

**P261:** Avoid breathing dust/fumes/gas/mist/vapors/spray

**P280:** Wear protective gloves/protective clothing/eye protection/face protection

**P302+P352:** IF ON SKIN: Wash with plenty of water

**P304+P340:** IF INHALED: Remove person to fresh air and keep comfortable for breathing

**P305+P351+P338:** IF IN EYES: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do and continue rinsing

**2.1.5. Hazard Statement:** Dry grinding of the sintered product will produce dust of potentially hazardous ingredients; wet grinding of the sintered product will produce mist with potentially hazardous ingredients; heating of the sintered product will produce fumes of potentially hazardous ingredients, which can be inhaled, swallowed or come in contact with the skin or eyes. May be harmful if swallowed, inhaled or in contact with the skin or eyes.

## **2.2. OSHA Regulatory Status**

Grinding this material will generate dusts and mists that are considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

## **2.3. Potential Effects of Exposure**

- 2.3.1. Inhalation:** Can cause irritation of the respiratory organs of a small percentage of sensitive persons, resulting in obstruction of respiratory ways with breathing difficulties: occupational asthma and interstitial fibrosis. It is reported that workers that have been exposed to air- borne cemented carbide dust have a higher risk of contracting lung cancer.
- 2.3.2. Skin Contact:** Can cause irritation or an allergic skin rash due to cobalt or nickel sensitization. Certain skin conditions, such as dry skin, may be aggravated by exposure.
- 2.3.3. Eye Contact:** Can cause irritation
- 2.3.4. Ingestion:** Reports outside the industry suggest that ingestion of significant amounts of cobalt has the potential to cause blood, heart and other organ problems.

**2.4. Environmental Effects:** No data is available at this time.

### Section 3: Information on Ingredients

Ingredient*	CAS Number	% By Weight	OSHA PEL TWS (mg/m <sup>3</sup> )	ACGIH TLV TWA (mg/m <sup>3</sup> )	NFPA Hazard Rating Scale, 0 - 4		
					Health	Fire	Reactivity
Tungsten Carbide, WC	12070-12-1	60-98	15	10	1	0	0
Cobalt, Co	7440-48-4	2-25	0.05**	0.02	2	3	0
Tantalum Carbide, TaC	12070-06-3	0-25	15	10	No Rating	0	0
Titanium Carbide, TiC	12070-08-5	0-25	15	10	No Rating	0	0
Niobium Carbide, NbC	12069-94-2	0-10	15	10	No Rating	0	0
Nickel, Ni	7440-02-0	0-1	1	1.5	2	4	1
Chromium Carbide, Cr <sub>3</sub> C <sub>2</sub>	12012-35-0	0-1	0.5	0.5	No Rating	0	0
Vanadium Carbide, VC	12070-10-9	0-0.5	15	10	No Rating	0	0
Molybdenum Carbide, Mo <sub>2</sub> C	N/A	0-0.5	N/A	N/A	1	0	0

\*Varies depending on grade

\*\*MIOSHA 0.05 mg/m<sup>3</sup>, OSHA 0.1 mg/m<sup>3</sup>

### 3.1 Hazardous Ingredients

All materials except for cobalt are present in the carburized forms and would remain in that form if ground.

Substance name	CAS No.	EC No.	Concentration (Weight %)	Classification according to Regulation (EC) No. 1272 [CLP]	SCL and/or M-Factor
Cobalt	7440-48-4	231-158-0	2-25%	Resp. Sens. 1 H334 Skin Sens. 1 H317 Aquatic chronic 4 H413	-

Substance Name	CAS No.	EC No.	Concentration (Weight %)	Classification According to 67/548/EEC or 1999/45/EC	SCL and/or M-Factor
Cobalt	7440-48-4	231-158-0	2-25%	Xn; R22-52/53 Harmful if swallowed Harmful to aquatic organisms May cause long-term adverse effects in the aquatic environment Xn; S (2-)22-24-37-61 Do not breath dust Avoid contact with skin Wear suitable gloves Avoid release to the environment	-

## Section 4: First Aid Measures

### 4.1. First Aid and Emergency Measures

- 4.1.1. **Overexposure:** If overexposure to dusts and mists from grinding occurs, have SDS and label information available and contact a poison control center or seek medical attention immediately.
- 4.1.2. **Inhalation:** If symptoms of pulmonary involvement develop (coughing, wheezing, shortness of breath, etc.) remove from exposure and seek medical attention.
- 4.1.3. **Skin Contact:** If irritation or rash occurs, thoroughly wash affected area with soap and water and isolate from exposure. If irritation or rash persists, seek medical attention.
- 4.1.4. **Eye Contact:** If irritation occurs, flush with large amounts of water. If irritation persists, seek medical attention.
- 4.1.5. **Ingestion:** If substantial quantities are swallowed, dilute with a large amount of water, induce vomiting and seek medical attention.

### 4.2. Carcinogenic Assessment

ACGIH, NTP, IARC and OSHA have identified nickel as a confirmed carcinogen. IARC and NIOSH have indicated that cobalt is a suspected human carcinogen. Cobalt is known to the State of California to cause cancer.

## Section 5: Firefighting Measures

### 5.1. Flammable Properties

- 5.1.1. **End Products** made from (sintered) cemented carbide are not flammable. However, dusts generated from, and/or during, machining operations may ignite if allowed to accumulate when exposed to an ignition source.
- 5.1.2. **Flashpoint:** None
- 5.1.3. **Autoignition:** N/A
- 5.1.4. **Lower Flammable Limit (LFL):** N/A
- 5.1.5. **Upper Flammable Limit (UFL):** N/A

## 5.2. Extinguishing Media

**5.2.1. Suitable Extinguishing Media:** For powder fires, smother with dry sand, dry dolomite, ABC type fire extinguisher, or flood with water. Move container from fire area if possible. For massive fires, use unmanned hose holder or monitor nozzles, or else withdraw and let fire burn out.

**5.2.2. Non-suitable Extinguishing Media:** N/A

## 5.3. Specific Hazards

**5.3.1.** Dusts may present a fire or explosion hazard under rare favoring conditions of particle size, dispersion and strong ignition source.

**5.3.2.** May generate toxic metal fumes when heated.

**5.3.3. Precautions for Firefighters:** For a powder fire confined to a small area, use a respirator approved for toxic dusts and fumes. For a large fire, firefighters should use self-contained breathing apparatus.

## Section 6: Accidental Release Measures

### 6.1. Precautions

**6.1.1. Personal:** If airborne dust is present, use personal protection recommended in Section 8.

**6.1.2. Environmental:** Material is not hazardous to the environment.

### 6.2. Spills: In the Event that Dust or Sludge is Released or Spilled:

**6.2.1.** Ventilate the area.

**6.2.2.** Clean up using methods that avoid dust generation such as vacuum (with appropriate filter to prevent airborne dust levels which exceed the PEL or TLV), wet dust mop or wet clean up.

**6.2.3.** If airborne dust is generated, use an appropriate NIOSH approved respirator.

**6.2.4.** Place reclaimed material in a suitable clean, dry container for recycling.

## Section 7: Handling and Storage

### 7.1. Handling

- 7.1.1. Avoid dispersion of grinding dust and mist into the air.
- 7.1.2. If airborne dust is generated, use an appropriate NIOSH approved respirator.
- 7.1.3. Avoid contact with skin, eyes, or clothing.
- 7.1.4. Wash hands thoroughly after handling, before eating or smoking.
- 7.1.5. Do not shake clothing, rags, or other items to remove dust instead removed dust by washing or vacuuming.

### 7.2. Storage

- 7.2.1. There are no specific storage requirements for end products.
- 7.2.2. Keep any dust and accumulated powders away from sparks and ignition sources.

## Section 8: Exposure Controls/Personal Protection

### 8.1. Permissible Exposure Limits (PEL)

All materials except for cobalt are present in the carburized forms and would remain in that form if ground.

Material	OSHA PEL: TWA	ACGIH TLV
Cobalt Metal, Dust, and Fume (as Co)	0.05 mg/m <sup>3</sup> **	0.02 mg/m <sup>3</sup>

\*\*MIOSHA 0.05 mg/m<sup>3</sup>, OSHA 0.1 mg/m<sup>3</sup>

### 8.2. Engineering Controls

- 8.2.1. **Dust Control:** Use local exhaust ventilation that is adequate to limit personal exposure to respirable airborne dust to levels that do not exceed the PEL or TLV.
- 8.2.2. **Respirators:** If adequate control equipment is not available, use a respirator as specified below.

### 8.3. Personal Protection Equipment (PPE)

- 8.3.1. **Respiratory:** Use the appropriate NIOSH approved respirator if airborne dust concentrations exceed the appropriate PEL or TLV. All appropriate requirements set forth in 29 CFR 1910.134 should be met.



**8.3.2. Skin:** Protective gloves or barrier cream are recommended when contact with dust or mist is likely. Prior to applying the barrier cream or use of protective gloves, wash thoroughly.

**8.3.3. Eyes and Face:** Safety glasses with side shields or goggles are recommended.

#### **8.4. Individual Protection Measures**

**8.4.1.** When using wet grinding equipment with closed water circuit, a suitable additive should be used to prevent cobalt from accumulating in the water. A recommended additive is CASTROL PE 425/6.

**8.4.2.** Clean equipment using methods that avoid dust generation such as vacuum (with appropriate filter to prevent airborne dust levels which exceed the PEL or TLV), wet dust mop or wet clean up. If airborne dust is generated, use an appropriate NIOSH approved respirator.

**8.4.3.** Wash hands thoroughly after handling dust or sludge, before eating or smoking.

**8.4.4.** Wash exposed skin at the end of work shift.

**8.4.5.** Do not shake clothing, rags, or other items to remove dust.

**8.4.6.** Dust should be removed from contaminated items by washing or vacuuming using the appropriate filters and precautions.

**8.4.7.** Allergic persons sensitive to cobalt or nickel must not be involved in activities where exposure to cobalt or nickel occurs.

**8.4.8.** Periodic medical examinations are recommended for individuals regularly working in the vicinity of dust and/or mist and for those who voluntarily or are required to wear respirators.

## Section 9: Physical and Chemical Properties

### 9.1 Physical Properties

Appearance and Odor: Dark Grey Metal / Odorless	Specific Gravity (H <sub>2</sub> O=1): 10 to 15
Boiling Point: N/A	Percent Volatile by Volume: 0
Vapor Pressure (mm Hg): N/A	Evaporation Rate: N/A
Vapor Density (Air=1): N/A	Best Monitored: Air Sample
Solubility in Water: Insoluble	Freezing Point:
Melting Point:	Viscosity:
Flashpoint: None	Evaporation Rate:

### 9.2 Chemical Properties

pH:	N/A
Flammability:	N/A
Explosive Limits:	N/A
Auto-ignition Temperature:	N/A
Decomposition Temperature:	N/A
Partition Coefficient: n-octanol/water:	N/A

## Section 10: Stability and Reactivity

### 10.1. Stability

10.1.1. Stable under normal conditions of pressure and temperature.

10.1.2. Non-reactive

10.1.3. No known conditions to avoid

10.1.4. No hazardous decomposition products

### 10.2. Incompatible Materials

10.2.1. Acids, strong oxidizers

### 10.3. Possibility of Hazardous Reactions

10.3.1. Not under normal circumstances

## **Section 11: Toxicological Information**

### **11.1. Routes of Exposure**

**11.1.1. Inhalation:** Dust, mist or fumes from grinding or heating of the sintered product can cause irritation of the respiratory organs of a small percentage of sensitive persons, resulting in obstruction of respiratory ways with breathing difficulties: occupational asthma and interstitial fibrosis. It is reported that workers that have been exposed to air-borne cemented carbide dust have a higher risk of contracting lung cancer.

**11.1.2. Skin Contact:** Can cause irritation or an allergic skin rash due to cobalt or nickel sensitization. Certain skin conditions, such as dry skin, may be aggravated by exposure.

**11.1.3. Eye Contact:** Can cause irritation.

**11.1.4. Ingestion:** Reports outside the industry suggest that ingestion of significant amounts of cobalt has the potential for causing bleed, heart and other organ problems.

## **Section 12: Ecological Information**

**12.1 Threat to the Environment:** None

## **Section 13: Disposal Considerations**

**13.1.** Dispose of any waste in accordance with appropriate government regulations.

**13.2.** May be sold for recycling.

## **Section 14: Transportation**

**14.1.** Transport material in accordance with appropriate government regulations.

## Section 15: Regulatory Information

**15.1. EU Regulations:** The final product listed on this SDS is in compliance with Directive 2011/65/EU of European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS). The product does not contain the following substances in concentrations greater than the maximum value listed after the substance:

- Lead (Pb): 1,000 ppm
- Cadmium (Cd): 100 ppm
- Mercury (Hg): 1,000 ppm
- Hexavalent Chromium (Cr6+): 1,000 ppm
- Poly Brominated Biphenyls (PBB): 1,000 ppm
- Poly Brominated Diphenyl ethers (PBDE): 1,000 ppm

The final product listed in this SDS does not contain REACH substances of very high concern (SCHC), according to the European Chemical Agency (ECHA). Certain products may contain nickel, which has been issued a REACH restriction. However, the restriction is not applicable due to the nature of this product.

**15.2. United States Regulations:** None.

**15.3 State Regulatory Information:** This product contains cobalt, which is listed in California Proposition 65 as a known cancer causing chemical.

## Section 16: Other Information

**16.1. Original Date of Preparation:** 21 December 2015

## Safety Data Sheet (SDS) OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Printing date 01/29/2015

Reviewed on 01/29/2015

### Section 1: Product identifier

#### 1.1. Product

1.1.1. **Trade name:** Titanium Aluminum Nitride Coating (Applied to cutting tools and wear parts)

1.1.2. **SYNONYMS:** TiAlN / AlTiN Coating

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

1.1.4. Product description: This is a finished coating applied to tools and wear parts in an enclosed process environment. End users are not exposed to health hazards associated with coating components unless the end product is modified after coating.

#### 1.2 Manufacturer/Supplier:

##### 1.2.1. Manufacturer Name:

PLATIT, Inc.  
1840 Industrial Drive, Suite 220  
Libertyville, IL 60048-9466  
PHONE: (847) 680-5270 (For product information)  
FAX: (847) 680-5271  
EMAIL: usa@platit.com

##### 1.2.2. Emergency telephone number:

Chemtrec 1-800-424-9300  
Outside USA 1-703-527-3887

### Section 2: Hazards Identification

#### 2.1. Classification of the substance or mixture

The product does not need classification according to OSHA HazCom Standard 29 CFR paragraph (d) of §1910.1200(g) and GHS Rev 03.

##### 2.1.1. Label elements

2.1.2. **GHS label elements** Non-Regulated Material

2.1.3. **Hazard pictograms** Non-Regulated Material

2.1.4. **Signal word** Non-Regulated Material

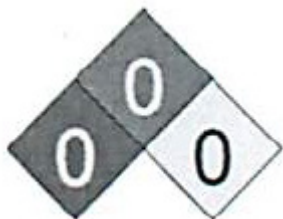
2.1.5. **Hazard statements** Non-Regulated Material

##### 2.1.6. Unknown acute toxicity:

100 percent of the mixture consists of ingredient(s) of unknown toxicity.

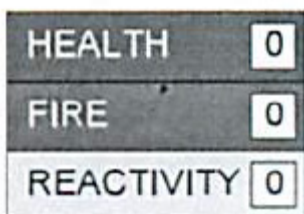
**2.2. Classification system:**

**2.2.1. NFPA ratings (scale 0 - 4)**



Health = 0  
 Fire = 0  
 Reactivity = 0

**2.2.2. HMIS-ratings (scale 0 - 4)**



3 Health =0  
 3 Fire =0  
 Reactivity =0

**2.3. Other Hazards** None known

**Section 3: Composition/Information on Ingredients**

25583-20-4	Titanium Nitride	70-90%
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**3.1. Chemical Characterization: Substances**

**3.1.1. CAS No. Description**

25583-20-4 titanium nitride

**3.1.2. Identification number(s)**

EC number: 247-117-5

**3.2. Description:** Mixture of substances listed below with nonhazardous additions.

**3.3. Dangerous Components:**

**3.3.1.** CAS: 7429-90-5 aluminium powder (pyrophoric) 20-30%

**3.3.2.** RTECS: BD 0330000 pyr. Sol. 1, H250; Water-react. 2, H261

**Section 4: FIRST Aid Measures**

**4.1 First Aid and Emergency Measures**

**4.1.1. General information:** No special measures required.

**4.1.2. After inhalation:** Not expected as a result of exposure to finished product.

**4.1.3. After skin contact:** Generally the product does not irritate the skin.

**4.1.4. After eye contact:** Not expected as a result of exposure to finished product.



- 4.1.5. **After swallowing:** Not anticipated under normal use.
- 4.1.6. **Information for doctor:**
- 4.1.7. **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- 4.1.8. **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

## Section 5: Fire Fighting Measures

### 5.1. Extinguishing media

- 5.1.1 **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- 5.1.2. **Special hazards arising from the substance or mixture** No further relevant information available.

### 5.2 Advice for firefighters

- 5.2.1. **Protective equipment:**  
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

## Section 6: Accidental Release Measures

### 6.1. Precautions

- 6.1.1. **Personal precautions, protective equipment and emergency procedures** Not required.
- 6.1.2. **Environmental precautions:** No special measures required.

### 6.2 Methods and material for containment and cleaning up:

- 6.2.1. Use the appropriate tools to collect the material and dispose of it in an approved waste disposal container. Dispose of the collected material according to regulations.

### 6.3 Reference to other sections

- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

## Section 7: Handling and Storage

### 7.1. Handling

- 7.1.1. **Precautions for safe handling** No special measures required.
- 7.1.2. **Information about protection against explosions and fires:** No special measures required.

### 7.2. Conditions for safe storage, including any incompatibilities

- 7.2.1. **Requirements to be met by storerooms and receptacles:** No special requirements.

**7.2.2. Information about storage in one common storage facility:** Not required.

**7.2.3. Further information about storage conditions:** None.

**7.2.4 Specific end use(s)** No further relevant information available.

## Section 8: Exposure Controls/Personal Protection

**8.1 Additional information about design of technical systems:** No further data; see section 7.

**8.2. Control parameters**

**8.3. Components with occupational exposure limits:**

**8.3.1.** 7429-90-5 aluminium powder (pyrophoric)

PEL	Long-term value: 15*; 15** mg/m <sup>3</sup> Total dust; ** Respirable fraction
REL	Long-term value: 10* 5** mg/m <sup>3</sup> as Al*Total dust**Respirable/pyro powd./welding f.
TLV	Long-term value: 1* mg/m <sup>3</sup> as Al; *as respirable fraction

**8.4. Additional information:** The lists that were valid during the creation were used as basis.

**8.5. Exposure controls**

**8.6 Personal protective equipment:**

**8.7 General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

**8.7.1. Breathing equipment:** Not required.

**8.7.2. Protection of hands:** Not required.

**8.7.3. Material of gloves** Not required.

**8.7.4. Penetration time of glove material** Not applicable.

**8.7.5. Eye protection:** Not required.

## Section 9: Information on basic physical and chemical properties

**9.1. General Information**

**9.1.1. Appearance:**

**Form:** Solid

**Color:** Violet

**Odor:** Odorless

**Odor threshold:** Not determined.

**9.1.2. pH-value:** Not applicable.

**9.1.3 Change in condition**



**Melting point/Melting range:** Not determined.  
**Boiling point/Boiling range:** 2500 °C (4532 °F)

- 9.1.4. **Flash point:** Not applicable.
- 9.1.5. **Flammability (solid, gaseous):** Not determined.
- 9.1.6. **Ignition temperature:** 400 °C (752 °F)
- 9.1.7. **Decomposition temperature:** Not determined.
- 9.1.8. **Auto igniting:** Product is not selfigniting.
- 9.1.9. **Danger of explosion:** Product does not present an explosion hazard.
- 9.1.10. **Explosion limits:**
  - Lower:** Not determined.
  - Upper:** Not determined.
- 9.1.11. **Vapor pressure:** Not applicable.
- 9.1.12. **Density@ 20 °C (68 °F):** 4.708 g/cm<sup>3</sup> (39.288 lbs/gal)
  - Relative density** Not determined.
  - Vapour density** Not applicable.
- 9.1.13. **Evaporation rate** Not applicable.
- 9.1.14. **Solubility in /Miscibility with Water:** Insoluble.
- 9.1.15. **Partition coefficient (n-octanol/water):** Not determined.
- 9.1.16. **Viscosity:**
  - Dynamic:** Not applicable.
  - Kinematic:** Not applicable.
- 9.1.17. **Solvent content:**
  - Organic solvents:** 0.0 %
  - Solids content:** 100.0%
- 9.1.18. **Other information** No further relevant information available.

## Section 10: Stability and Reactivity

- 10.1 **Reactivity** No further relevant information available.
- 10.2 **Chemical stability** Stable under normal conditions.
- 10.3. **Thermal decomposition I conditions to be avoided:** No decomposition if used according to specifications.
- 10.4. **Possibility of hazardous reactions** No dangerous reactions known.
- 10.5. **Conditions to avoid** No further relevant information available.
- 10.6. **Incompatible materials:** Strong oxidizing agents.

## 10.7. Hazardous decomposition products:

### 10.7.1. Nitrogen oxides

### 10.7.2. Metal oxide fumes

## Section 11: Toxicological Information

### 11.1 Primary irritant effect:

11.1.1. On the skin: No irritating effect.

11.1.2. On the eye: No irritating effect.

### 11.2. Additional toxicological information:

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

### 11.3. Carcinogenic categories

#### 11.3.1. IARC (International Agency for Research on Cancer)

None of the ingredients are listed.

Group 1 - Carcinogenic to humans

Group 2A - Probably carcinogenic to humans

Group 2B - Possibly carcinogenic to humans

Group 3 - Not classifiable as to its carcinogenicity to humans

Group 4 - Probably not carcinogenic to humans

#### 11.3.2. NTP (National Toxicology Program)

None of the ingredients are listed.

#### 11.3.3. OSHArCa (Occupational Safety & Health Administration)

None of the ingredients are listed.

### 11.4. Toxicity

11.4.1. Aquatic toxicity: No further relevant information available.

**Persistence and degradability** No further relevant information available.

**Behavior in environmental systems:**

**Bioaccumulative potential** No further relevant information available.

**Mobility in soil** No further relevant information available.

**Additional ecological information:**

**General notes:** Not known to be hazardous to water.

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**Other adverse effects** No further relevant information available.

- **Waste treatment methods**

• **Recommendation:**

Smaller quantities can be disposed of with household waste.

Recycle or dispose with household trash.

- **Uncleaned packagings:**

• **Recommendation:** Disposal must be made according to official regulations.

**CERTIZIT Sacramento, LP**

(Formerly PROMAX Tools L.P.)

11312 Sunrise Gold Circle \ Rancho Cordova, CA 95742-6508 \ USA

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E. info.sacramento@ceratizit.com \ www.ceratizit.com \ www.promaxtools.com



**UN-Number**

**DOT, ADR, ADN, IMDG, IATA Non-Regulated Material**

**UN proper shipping name**

**DOT, ADR, ADN, IMDG, IATA Non-Regulated Material**

**Transport hazard class(es)**

**DOT, ADR, ADN, IMDG, IATA**

**Class Non-Regulated Material**

**Packing group**

**DOT, ADR, IMDG, IATA Non-Regulated Material**

**Environmental hazards:**

**Marine pollutant:** No

**Safety Data Sheet (SDS)**

**OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.**

**Printing date 01/29/2015 Reviewed on 01/29/2015**

**Trade name: Titanium Aluminum Nitride Coating (Applied to cutting tools and wear parts)**

**SYNONYMS: TiAlN Coating**

- **Special precautions for user** Not applicable.

- **Transport in bulk according to Annex Ilof**

**MARPOL73/78 and the IBC Code** Not applicable.

**UN "Model Regulation":**

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

**Sara**

**Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

**Section 313 (Specific toxic chemical listings):**

7429-90-5 aluminium powder (pyrophoric)

**TSCA (Toxic Substances Control Act):**

All ingredients are listed.

**Proposition 65**

**Chemicals known to cause cancer:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

**Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

**Carcinogenic categories**

**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**TLV(Threshold Limit Value established by ACGIH)**

7429-90-5 aluminium powder (pyrophoric) A4

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

**GHS label elements** Non-Regulated Material

**Hazard pictograms** Non-Regulated Material

**Signal word** Non-Regulated Material

**Hazard statements** Non-Regulated Material

**National regulations:**

The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

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**State Right to Know**

CAS: 25583-20-4 titanium nitride

CAS: 7429-90-5 aluminium powder (pyrophoric) <§> pyr. Sol. 1, H250; Water-react. 2, H261

RTECS: BD 0330000

All ingredients are listed.

JPN

**Safety Data Sheet (SDS)**

**OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.**

**Printing date 01/29/2015 Reviewed on 01/29/2015**

**Trade name: Titanium Aluminum Nitride Coating (Applied to cutting tools and wear parts)**

**SYNONYMS: TiAlN Coating**

• **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

**Date of preparation /last revision 01/29/2015 / -**

**Abbreviations and acronyms:**

ADR: Accord europeen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carnage of Dangerous Goods by Road)

ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

Pyr. Sol. 1: Pyrophoric Solids, Hazard Category 1

Water-react. 2: Substances and Mixtures which, in contact with water, emit flammable gases, Hazard Category 2

\* **Data compared to the previous version altered.**

SDS created by MSDS Authoring Services www.msdsauthoring.com (877) 204-9106