



# AMERICAN TOOTH INDUSTRIES

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## SAFETY DATA SHEET

### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

<b>PRODUCT NAME</b>	Pozzi Crowns (All Sizes)
<b>Product Description</b>	Stainless Steel, 305
<b>Manufacturer</b>	American Tooth Industries 1200 Stellar Drive Oxnard, CA 93033 805-487-9868 Emergency Phone Number: Infotrac: 800-352-5053
<b>Recommended use</b>	Professional use: Stainless steel product manufacture.

### 2. HAZARDS IDENTIFICATION

<b>Hazard classification</b>	This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). This product is an article and, as such, does not present a hazard to human health by inhalation or ingestion. Skin sensitization      Category 1 Carcinogenicity        Category 1B Specific target organ toxicity (repeated exposure)      Category 1
<b>Signal Word</b>	N/A
<b>Hazard Statements</b>	May cause cancer May cause an allergic skin reaction Causes damage to the respiratory tract through prolonged or repeated exposure if inhaled

**Symbol**



## Precautionary statements

Do not handle until all safety precautions have been read and understood.  
Use personal protective equipment as required.  
Wear protective gloves.  
If skin irritation or rash occurs: Get medical advice attention.

## Other hazards

When product is subjected to welding, burning, melting, sawing, brazing, grinding, buffing, polishing, or other similar heat-generating processes, the following potentially hazardous airborne particles and/or fumes may be generated:: Zinc, copper, magnesium, or cadmium fumes may cause metal fume fever, Titanium dioxide an IARC Group 2B carcinogen, Hexavalent Chromium (Chromium VI) may cause lung, nasal, and/or sinus cancer, Vanadium pentoxide (V<sub>2</sub>O<sub>5</sub>) affects eyes, skin, respiratory system, Soluble molybdenum compounds such as molybdenum trioxide may cause lung irritation.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Statement for unknown toxicity

Steel products in their natural state do not present an inhalation or contact hazard, however operations such as burning or welding, sawing, brazing and grinding may release fumes and or dust, which may present health hazards. There is not an American Conference of Governmental Industrial Hygienists (ACGIH) threshold limit value (TLV) or OSHA exposure limit (PEL) established for steel.

#### Chemical name

See graph below

#### Common name/synonyms Impurities and stabilizing additives\*

Various Stainless-Steel Products

Chemical Name	CAS No.	Weight-%
Iron	7439-89-6	<90
Nickel	7440-02-0	0-46
Chromium	7440-47-3	10-30
Manganese	7439-96-5	0-10
Molybdenum	7439-98-7	0-7.0
Silicon	7440-21-3	0-6.5
Aluminum	7429-90-5	0-4.0
Copper	7440-50-8	0-4.0
Tungsten	7440-33-7	0-2.5
Titanium	7440-32-6	0-2.4
Boron	7440-42-8	0-2.25
Vanadium	7440-62-2	0-1.1
Tantalum	7440-25-7	0-1.0
Niobium (Columbium)	7440-03-1	0-1.0
Cobalt	7440-48-4	0-0.5

\*Specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret is required.

## 4. FIRST AID MEASURES

### Description of First Aid Measures

<b>Inhalation</b>	If excessive amounts of smoke, fume, or particulate are inhaled during processing, remove to fresh air and consult a qualified health professional.
<b>Skin Contact</b>	In the case of skin allergic reactions see a physician.
<b>Eye Contact</b>	In the case of particles coming in contact with eyes during processing, treat as with any foreign object.
<b>Ingestion</b>	Not an expected route of exposure.

### Most important symptoms or effects, both acute and delayed:

May cause allergic skin reaction.

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

Treat symptomatically

## 5. FIRE-FIGHTING MEASURES

<b>Suitable extinguishing media</b>	Product not flammable in the form as distributed, flammable as finely divided particles or pieces resulting from processing of this product. Isolate large fires and allow to burn out. Smother small fires with salt (NaCl) or class D dry powder fire extinguisher.
<b>Unsuitable extinguishing media</b>	Do not spray water on burning metal as an explosion may occur. This explosive characteristic is caused by the hydrogen and steam generated by the reaction of water with the burning material.
<b>Special hazards arising from substance</b>	Intense heat. Very fine, high surface area material resulting from grinding, buffing, polishing, or similar processes of this product may ignite spontaneously at room temperature. <b>WARNING:</b> Fine particles resulting from grinding, buffing, polishing, or similar processes of this product may form combustible dust-air mixtures. Keep particles away from all ignition sources including heat, sparks, and flame. Prevent dust accumulations to minimize combustible dust hazard. Titanium dioxide an IARC Group 2B carcinogen. Hexavalent Chromium (Chromium VI) may cause lung, nasal, and/or sinus cancer. Vanadium pentoxide (V <sub>2</sub> O <sub>5</sub> ) affects eyes,

skin, respiratory system. Zinc, copper, magnesium, or cadmium fumes may cause metal fume fever. Soluble molybdenum compounds such as molybdenum trioxide may cause lung irritation.

Explosion data  
Sensitivity to Mechanical Impact None.  
Sensitivity to Static Discharge None.

**Special protective equipment and Precautions for fire fighters**

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment as required.

**Environmental precautions**

Not applicable to massive product.

**Methods and materials for containment and cleaning up**

Not applicable to massive product.

**7. HANDLING AND STORAGE**

**Handling**

Very fine, high surface area material resulting from grinding, buffing, polishing, or similar processes of this product may ignite spontaneously at room temperature. **WARNING:** Fine particles resulting from grinding, buffing, polishing, or similar processes of this product may form combustible dust-air mixtures. Keep particles away from all ignition sources including heat, sparks, and flame. Prevent dust accumulations to minimize combustible dust hazard.

**Storage**

Keep chips, turnings, dust, and other small particles away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

**Storage temperature**

N/A

**Incompatible materials**

Dissolves in hydrofluoric acid. Ignites in the presence of fluorine. When heated above 200°C, reacts exothermically with the following: Chlorine, bromine, halocarbons, carbon tetrachloride, carbon tetrafluoride, and freon.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

## OSHA Permissible Exposure Limits

Chemical Name	ACGIH TLV	OSHA PEL
Iron 7439-89-6	(C)	(C)
Nickel 7440-02-0	TWA: 1.5 mg/m <sup>3</sup> inhalable fraction	TWA: 1 mg/m <sup>3</sup>
Chromium 7440-47-3	TWA: 0.5 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>
Manganese 7439-96-5	TWA: 0.02 mg/m <sup>3</sup> respirable fraction TWA: 0.1 mg/m <sup>3</sup> inhalable fraction TWA: 0.02 mg/m <sup>3</sup> Mn TWA: 0.1 mg/m <sup>3</sup> Mn	(vacated) STEL: 3 mg/m <sup>3</sup> fume (vacated) Ceiling: 5 mg/m <sup>3</sup> Ceiling: 5 mg/m <sup>3</sup> fume Ceiling: 5 mg/m <sup>3</sup> Mn
Molybdenum 7439-98-7	TWA: 10 mg/m <sup>3</sup> inhalable fraction TWA: 3 mg/m <sup>3</sup> respirable fraction	(C)
Silicon 7440-21-3	(C)	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction
Copper 7440-50-8	TWA: 0.2 mg/m <sup>3</sup> fume TWA: 1 mg/m <sup>3</sup> Cu dust and mist	TWA: 0.1 mg/m <sup>3</sup> fume TWA: 1 mg/m <sup>3</sup> dust and mist
Aluminum 7429-90-5	TWA: 1 mg/m <sup>3</sup> respirable fraction	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction
Tungsten 7440-33-7	STEL: 10 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup> W TWA: 5 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup> W	(vacated) STEL: 10 mg/m <sup>3</sup> (vacated) STEL: 10 mg/m <sup>3</sup> W
Titanium 7440-32-6	(C)	(C)
Boron 7440-42-8	(C)	(C)
Vanadium 7440-62-2	(C)	Ceiling: 0.5 mg/m <sup>3</sup> V <sub>2</sub> O <sub>5</sub> respirable dust Ceiling: 0.1 mg/m <sup>3</sup> V <sub>2</sub> O <sub>5</sub> fume
Tantalum 7440-25-7	(C)	TWA: 5 mg/m <sup>3</sup>
Niobium (Columbium) 7440-03-1	(C)	(C)
Cobalt 7440-48-4	TWA: 0.02 mg/m <sup>3</sup> TWA: 0.02 mg/m <sup>3</sup> Co	TWA: 0.1 mg/m <sup>3</sup> dust and fume

**ACGIH Threshold Limit Values** N/A

**Other limitations recommended by manufacturer** N/A

**Appropriate Engineering Controls** Individual protection measures, such as personal protective equipment.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Solid
<b>Color</b>	Silver-gray metallic
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	N/A
<b>pH</b>	N/A
<b>Melting Point</b>	1430-1540 C / 2600-2800 F
<b>Freezing Point</b>	N/A
<b>Initial Boiling Point</b>	N/A
<b>Boiling Range</b>	N/A
<b>Flash Point</b>	N/A
<b>Evaporation Rate</b>	N/A
<b>Flammability (solid, gas)</b>	Product not flammable in the form as distributed, flammable as finely divided particles or pieces resulting from processing of this product
<b>Upper/Lower Flammability limits</b>	N/A
<b>Explosive Limits</b>	N/A

<b>Vapor Pressure</b>	N/A
<b>Vapor Density</b>	N/A
<b>Specific Gravity</b>	7-9
<b>Water Solubility</b>	Insoluble
<b>Relative Density</b>	N/A
<b>Partition Coefficient: n-octano/water</b>	N/A
<b>Auto-ignition Temperature</b>	N/A
<b>Decomposition Temperature</b>	N/A
<b>Viscosity</b>	N/A

## 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	N/A
<b>Chemical Stability</b>	Stable under normal conditions.
<b>Hazardous Reactions</b>	None under normal processing.
<b>Conditions to avoid</b>	N/A
<b>Materials to avoid</b>	Dust formation and dust accumulation.
<b>Hazardous Decomposition Products</b>	When product is subjected to welding, burning, melting, sawing, brazing, grinding, buffing, polishing, or other similar heat-generating processes, the following potentially hazardous airborne particles and/or fumes may be generated: Titanium dioxide an IARC Group 2B carcinogen. Hexavalent Chromium (Chromium VI) may cause lung, nasal, and/or sinus cancer. Vanadium pentoxide (V2O5) affects eyes, skin, respiratory system. Soluble molybdenum compounds such as molybdenum trioxide may cause lung irritation.

## 11. TOXICOLOGICAL INFORMATION

<b>Identify likely routes of exposure:</b>	Inhalation of dust or fume during welding, burning, melting, cutting, brazing, grinding, machining, milling and other operations.
<b>Inhalation</b>	Not an expected route of exposure for product in massive form.
<b>Ingestion</b>	Not an expected route of exposure for product in massive form.
<b>Skin</b>	Not an expected route of exposure for product in massive form.
<b>Eye</b>	Not an expected route of exposure for product in massive form.

Chemical Name:	Oral LD50:	Dermal LD50:	Inhalation LC50:
Iron: 7439-89-6	98,600 mg/kg bw	>	> 0.25 mg/L
Nickel: 7440-02-0	> 9000 mg/kg bw	>	> 10.2 mg/L
Chromium: 7440-47-3	> 3400 mg/kg bw	>	> 5.41 mg/L
Manganese: 7439-96-5	>2000 mg/kg bw	>	>5.14 mg/L
Molybdenum: 7439-98-7	> 2000 mg/kg bw	> 2000 mg/kg bw	> 5.10 mg/L
Silicon: 7440-21-3	> 5000 mg/kg bw	> 5000 mg/kg bw	> 2.08 mg/L
Copper: 7440-50-8	481 mg/kg bw	>2000 mg/kg bw	>5.11 mg/L
Aluminum: 7429-90-5	15,900 mg/kg bw	>	> 1 mg/L
Tungsten: 7440-33-7	> 2000 mg/kg bw	> 2000 mg/kg bw	> 5.4 mg/L
Titanium: 7440-32-6	> 5000 mg/kg bw	>	>
Boron: 7440-42-8	> 2000 mg/kg bw	>	> 5.08 mg/L
Vanadium: 7440-62-2	> 2000 mg/kg bw	>	>
Tantalum: 7440-25-7	> 2000 mg/kg bw	> 2000 mg/kg bw	> 5.18 mg/L
Niobium (Columbium): 7440-03-1	> 10,000 mg/kg bw	> 2000 mg/kg bw	>
Cobalt: 7440-48-4	550 mg/kg bw	>2000 mg/kg bw	<0.05 mg/L

**Description of delayed, immediate or chronic effects from short term and long term exposure:**

Stainless, as a solid, is not toxic and presents no health hazard. Overexposure to dusts and or fumes which may result during processing can pose health hazards as defined below.

**Acute Effects of Overexposure:** Product not classified.

**Chronic Effects of Overexposure:** Nickel or Cobalt containing alloys may cause sensitization by skin contact. Cobalt-containing alloys may cause sensitization by inhalation.

**Medical conditions know to be aggravated by exposure to this material:**  
May cause cancer by inhalation.

**12. ECOLOGICAL INFORMATION (If available)**

Not applicable for solid alloy product in its as shipped form. Articles produced from solid product are not an ecological hazard. No information has been found on specific alloy to establish its effect onto the environment if released in a finely divided form. It is believed that finely divided alloy will be hazardous to fish, animals, plants, and the environment. The degree of hazard would depend on the particle size and quantity released. If particle size is small enough, alloy may be ingested by wildlife, with possible toxic effects occurring.

Solid alloy is not expected to migrate easily into soil or ground water. Finely divided alloy can become mobile in water and contaminate soil and ground water. Finely divided alloy may persist in the environment for long periods of time based upon the corrosion resistant, insoluble, and non-biodegradable properties of the alloy. In addition, heavy metals may contaminate the food chain and be consumed by humans.

Some alloy components will react with oxygen to form metallic oxides at varying rates. Iron oxidizes most rapidly in moist air. Metallic particulate discharged to a POTW may pass through or

contaminate sewage sludge, may interfere with the treatment system process, and may be non compliant with POTW permit or other regulations.

### 13. DISPOSAL CONSIDERATIONS (If applicable)

If product as shipped becomes a solid waste, it would not be considered a hazardous waste and should be recycled. Product dusts from processing may be classified as hazardous wastes which are defined within 40 CFR 261 as well as state and or local regulation. Solid waste generated from product processing should be classified by a competent environmental professional and disposed, processed, or recycled in accordance with federal, state, and local regulation.

### 14. TRANSPORT INFORMATION (If applicable)

Hazardous Material Proper Shipping Name: N/A for solid formed product  
Hazard Class: N/A for solid formed product  
Identification Number: N/A for solid formed product

**Note:** Stainless steel transported in coiled form is under tension and represents a significant source of potential energy due to the tension induced by coiling; it will uncoil to try lay flat in a long strip when banding is cut or other forces are released; uncoiling can be sudden and catastrophic and measures should be taken to ensure that uncoiling will not occur.

### 15. REGULATORY INFORMATION (If available)

SARA Title III Hazard Categorization: Product (dust and fume) is categorized as an immediate (acute) health hazard and a delayed (chronic) health hazard as defined by 40 CFR 370. Product is not categorized as a fire hazard. Product is not categorized as a reactivity hazard. Product is not categorized as a pressure release hazard.

SARA Title III Section 302 Extremely Hazardous Substances (EHS's): None

SARA Title III Section 312 Reportable Substances:

Nickel, Cobalt, Chromium, Aluminum, Manganese and Copper.

SARA 313

Section 313 of Title 111 of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372: Chromium (Cr)

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA Hazardous Substance: (If diameter of released particle >10 micrometers)

Nickel – 100 pound threshold

Chromium – 5000 pound threshold

Copper – 5000 pound threshold

TSCA: The components of this product are listed on the Toxic Substance Control Act Inventory.

Pennsylvania R-T-K List:

Aluminum, Manganese, Molybdenum, Nickel, Silicon, Chromium, Cobalt, Copper, and Tantalum.

New Jersey R-T-K Environmental Hazardous Substance List:

Aluminum, Chromium, Copper, Cobalt, Manganese, and Nickel

California Proposition 65:

Listed possible trace elements known by the state to cause cancer – Arsenic (inorganic), Cadmium, Lead.

Listed possible trace elements known by the state to cause reproductive toxicity – Lead

Listed components known by the state to cause cancer – Nickel, Cobalt (metal powder)

Listed components known by the state to cause reproductive effects - None



## 16. OTHER INFORMATION

**NFPA Rating:** Health: 1                      Flammability: 0                      Reactivity: 0  
**HMIS Rating:** Health: 2                      Flammability: 0                      Reactivity: 0                      PPE: B  
                    Chronic Health Hazard

**EPA Hazardous Waste Number:** N/A

**Note:** The percent composition Section 2 reflects the range that is possible within this group of products. These are not the technical specifications for particular product. All grades do not include all hazardous ingredients in section 2.

### ABBREVIATION / ACRONYMS

ACGIH	American Conference of Governmental Hygienists
CAS	Chemical Abstracts Service
CFR	Code of Federal Regulations
HMIS	Hazardous Materials Information System
IARC	International Agency for Research on Cancer
mg/m <sup>3</sup>	Milligrams per cubic meter of air
MSDS	Material Safety Data Sheets
MSHA	Mine Safety and Health Administration
N/A	Not Applicable
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
POTW	Publicly Owned Treatment Work
PPE	Personal Protective Equipment
STEL	Short Term Exposure Limit
TLV	Threshold Limit Value
TWA	Time-weighted Average

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