

Safety Data Sheet

Revision Date: 9/1/15

SECTION 1 – Identification

1.1 Product Identifier

Hi-Carbon Taps, Dies, and Screw Extractors

1.2 Recommended use and Restrictions on use

Metal removal

1.3 Supplier's details

MANUFACTURER'S NAME: Norseman Drill & Tool, Inc
ADDRESS: 355 State St., St. Paul, MN. 55107
TELEPHONE #: 651-227-8911

1.4 Emergency telephone number

651-268-5111

SECTION 2 – Hazard Identification

2.1 Hazard Classification

- This product is considered to be an article, and should not present a health hazard during normal use.

2.2 Label Elements

- Signal Word: n/a
- Symbols: n/a
- Pictograms: n/a

2.3 Hazards not otherwise classified

We do not consider this product in the form it is sold to constitute a physical or health hazard per OSHA GHS 29 CFR 1910.1915, 1926. However, subsequent operations such as grinding, melting, welding, cutting or processing in any other fashion may present the following hazards:

OSHA Hazards: Carcinogen
Skin Sensitizer
Target Organ Effect – Lungs
Reproductive Toxicant

GHS Classification: Carcinogenicity (Category 2)
Skin Sensitization (Category 1)
Specific Target Organ Toxicity – Repeated Exposure (Category 1)
Reproductive Toxicity (Category 1A)



Pictogram (s):

Signal Word: Danger

Hazard Statements

H317: Dust/fumes may cause an allergic skin reaction

H351: Dust/fumes suspected of causing cancer via inhalation

H372: Inhalation of dust/fumes causes damage to respiratory tract through prolonged or repeated exposure

H372: Dust/fumes cause damage to the central nervous system and systems for reproduction through prolonged or repeated exposure*

H360: Dust/fumes may damage fertility or the unborn child*

Precautionary Statements

P202: Do not handle until all safety precautions have been read and understood

P261: Avoid breathing dust/fumes

P281: Use personal protective equipment as required

P308+P313: If exposed or concerned: Get medical advice/attention.

*applies only to duct/fumes generated from leaded steel products

Potential Health Effects

Eye Contact

Dusts or particulates may cause mechanical irritation including pain, tearing, and redness. Scratching of the cornea can occur if eye is rubbed. Fumes may be irritating. Contact with the heated material may cause thermal burns.

Skin Contact

Dusts or particulate may cause mechanical irritation due to abrasion. Coated steel may cause skin irritation in sensitive individuals (see Section 16 for additional information.) Some components in this product are capable of causing an allergic reaction, possible resulting in burning, itching and skin eruptions. Contact with heated material may cause thermal burns.

Inhalation

Dusts may cause irritation of the nose, throat, and lungs. Excessive inhalation of metallic fumes and dusts may result in metal fume fever, an influenza-like illness. It is characterized by a sweet or metallic taste in the mouth, accompanied by dryness and irritation of the throat, cough, shortness of breath, pulmonary edema, general malaise, weakness, fatigue, muscle and joint pains, blurred vision, fever and chills. Typical symptoms last from 12 to 48 hours.

Ingestion

Not expected to be acutely toxic via ingestion based on the physical and chemical properties of the product. Swallowing of excessive amounts of the dust may cause irritation, nausea, and diarrhea.

Potential Fire and Explosion Hazards

Under normal conditions, steel products do not present fire or explosion hazards, and dust generated by handling steel products is oxidized and not combustible. Processing of steel product by some individual customers may produce potentially combustible dust that may represent a fire or explosion hazard.

Chronic or Special Toxic Effects

Repeated exposure to fine dusts may inflame that nasal mucosa and cause changes to the lung. In addition, a red-brown pigmentation of the eye and/or skin may occur. Welding fumes have been associated with adverse health effects. Contains components that may cause cancer or reproductive effects. The following components are listed by NTP, OSHA, or IARC as carcinogens: Nickel, Chromium (hexavalent), cobalt, lead, cadmium, antimony (trioxide), arsenic, and beryllium.

Target Organs

Overexposure to specific components of this product that are generated in dusts or fumes may cause adverse effects to the following organs or systems: eyes, skin, liver, kidney, central nervous system, cardiovascular system, respiratory system.

Medical Conditions Aggravated by Exposure

Diseases of the skin such as eczema may be aggravated by exposure. Also, disorders of the respiratory system including asthma, bronchitis, and emphysema. Long-term inhalation exposure to agents that cause pneumoconiosis (e.g. dust) may act synergistically with inhalation of oxide fumes or dusts of this product.

SECTION 3 – Composition/Information on Ingredients

Threshold limit values (TLV) for constituent elements

CONSTITUENT ELEMENT	CAS NO.	Percent by Weight%	ACGIH TLV (mg/m3)	OSHA PEL (mg/m3)
Base Metal: Iron (Fe)	7439-89-6	Balance	5 (Oxide dust/fume	10 (Oxide dust/fume)

Alloying Elements:				
Aluminum (Al)	7429-90-5	<0.5	10 (dust), 5 (fume)	15 (dust), 5 Respirable fraction
Antimony (Sb)	7440-36-0	<0.9	0.5 (As antimony)	0.5 As antimony
Arsenic (As)	7440-38-2	<0.09	0.01 As Arsenic (A1 Carcinogen)	0.01 As Arsenic
Beryllium (Be)	7440-41-7	<1.0	0.002 As Beryllium (A2 Carcinogen) 0.01 As Beryllium (STEL)	0.002 As Beryllium 0.005 As Beryllium (Ceiling)
Bismuth (Bi)	7440-69-9	<1.5	Not established	Not established
Boron (B)	7440-42-8	<.01-1.0	10 Oxide Dust	15 Oxide Dust
Cadmium (Cd)	7440-43-9	<0.9	0.01As Cadmium (A2 Carcinogen) 0.002 Respirable fraction	0.005 As Cadmium 0.0025 As Cadmium (Action Level)
Calcium (Ca)	1305-78-8	<0.9	2 Oxide dust	5 Oxide Dust
Carbon	7440-44-0	<1.2	Not established	Not established
Chromium (Stainless grades)	7440-47-3	4-20	0.5 Metal	1 Metal
Chromium (Carbon grades)	7440-473	0.01-2.5	0.5 Metal	1 Metal
Cobalt (Co)	7440-48-4	<0.09	0.02 As Cobalt (A3 Carcinogen)	0.1 Metal/Dust/Fume
Copper (Cu)	7440-50-8	0.03-1.9	1 Dust, 0.2 Fume	1 Dust, 0.1 Fume
Lead (Leaded Grades) (Pb)	7439-92-1	.15-0.35	0.05 Dust/Fume (A3 Carcinogen)	0.05 Dust/Fume
Lead (All other grades) (Pb)	7439-92-1	<0.05	0.05 Dust/Fume (A3 Carcinogen)	0.05 Dust/Fume
Magnesium (Mg)	7439-95-4	<0.9	Not established	Not Established
Manganese (Mn)	7439-96-5	0-2.5	0.2 Elemental Mn and Inorg Compounds	5 Fume (Ceiling)
Molybdenum (Mo)	7439-98-7	0-1.2	10 Insoluble Compounds	15 Insoluble
Niobium (Nb)	7440-03-1	<0.9	Not established	1 Metal and Insoluble Compounds
Nickel (Ni)	7440-02-0	<4.0	1.5 Metal	
Nitrogen (N)	7727-37-9	<0.9	Simple Asphyxiant	Simple Asphyxiant
Phosphorus (P)	7723-14-0	<0.9	0.1 Phosphorus	0.1 Phosphorus
Selenium (Se)	7782-19-2	<0.9	0.2 Selenium	0.2 Selenium
Silicon (Si)	7440-21-3	<03.0	10 Dust	
Sulfur (S)	7704-34-9	<0.9	5.2 Sulfur Dioxide, 13 Sulfur Dioxide	
Tin (Sn)	7723-14-0	<0.9	2 Metal, Oxide and Inorganic Compounds	
Tellurium	13494-80-	0-0.1	0.1 Vapor	
Titanium (Ti)	7440-32-6	<0.9	Not established	
Tungsten (W)	7440-33-7	<0.9	5 Insoluble Compounds as W 10 Insoluble Compounds as W (STEL)	
Vanadium (V)	7440-62-2	<1.0	0.05 Oxide Dust/Fume	
Zinc (Zn)	7440-66-6	<10.0	10 Oxide dust,5 Oxide fume,10 Oxide	

SECTION 4 – First Aid Measures

Description of first aid measures

PRIMARY ROUTES OF ENTRY: EMERGENCY FIRST AID:

Inhalation	Remove to fresh-air, if condition continues-consult physician.
Eye Contact	Flush well with running water to remove particulate. Get medical attention.
Skin Contact	Brush off excess dust. Wash area with soap and water.
Ingestion	Seek medical help if large quantities of material have been ingested.

Notes to Physician:

Inhalation of metal fume or metal oxides may produce an acute febrile state, with cough, chills, weakness, and general malaise, nausea, vomiting, muscle cramps, and remarkable leukocytosis. Treatment is symptomatic, and condition is self-limited in 24-48 hours. Chronic exposure to dusts may result in pneumoconiosis of mixed type.

SECTION 5 – Fire-fighting Measures

Flash Point: Not applicable

Flammable Limits (% volume in air): Not applicable

Auto ignition Temperature: No applicable

Extinguishing Media: For molten metal, use dry powder or sand. For steel dust use dry powder or sand, water, foam, argon or nitrogen.

Steel products do not present fire or explosion hazards under normal conditions. Dusts generated in grinding operations may ignite if allowed to accumulate.

SECTION 6 – Accidental Release Measures

Precautions if Material is Spilled or Released - Emergency response is unlikely unless in the form of combustible dust. Avoid inhalation, eye, or skin contact of dusts by using appropriate precautions outlined in this SDS (see section 8). Fine turnings and small chips should be swept or vacuumed and placed into appropriate disposable containers. Keep fine dust or powder away from sources of ignition. Scrap should be reclaimed for recycling. Prevent materials from entering drains, sewers, or waterways. Specific standards and regulations may be applicable to materials generated by individual customer processes. As appropriate, these standards and regulations should be consulted for applicability.

Fire and Explosion Hazards

Some customer processes may generate combustible dust that may require specific precautions when cleaning spills or releases of dust.

Environmental Precautions - Some grades of steel may contain reportable quantities of alloying elements. See Section 15 for additional information.

Waste Disposal Methods - Dispose used or unused product in accordance with applicable Federal, State, and Local regulations. Please recycle.

SECTION 7 – Handling and Storage

Sharp edges could cut. Handle with care. Store in clean, cool area, and away from strong oxidizers.

Storage Temperatures - Stable under normal temperatures and pressures.

Precautions to be taken in Handling and Storing - Store away from strong oxidizers. Dusts and/or powders, alone, or combined with process specific fluids, may form explosive mixtures with air. Applicable Federal, state and local laws and regulations may require testing dust generated from processing of steel products to determine if it represents a fire or explosion hazard and to determine appropriate protection methods. Avoid breathing dusts or fumes.

SECTION 8 – Exposure Controls/Personal Protection

VENTILATION REQUIREMENTS: General – Recommended, Local – As Required

PERSONAL PROTECTIVE EQUIPMENT:

Respiratory Protection: If fumes, misting or dust condition occurs and TLV as indicated in Section II is exceeded, provide NIOSH approved respirators.

Recommended Gloves: As Required

Other Clothing or Equipment: As Required

SECTION 9 – Physical and Chemical Properties

Appearance and Odor	Silver grey to grey black with metallic luster	Vapor Density (Air=1)	Not applicable
Boiling Point	Not applicable	% Volatiles by Volume	Not applicable
Melting Point	Approximately 2800 F	Other physical and chemical data	none
pH	Not applicable	Vapor Pressure	Not applicable
Specific Gravity (H ₂ O=1)	Not applicable	Solubility in H ₂ O	Insoluble
		Evaporation (ButylAcetate=1)	Not applicable

SECTION 10 – Stability and Reactivity

REACTIVITY: N/A

CHEMICAL STABILITY: Stable

POSSIBILITY OF HAZARDOUS REACTIONS: None

CONDITIONS TO AVOID: steel at temperatures above the melting point may liberate fumes containing oxides of iron and alloying elements. Avoid generation of airborne fume

INCOMPATIBILITY: Reacts with strong acids to form hydrogen gas. Do not store near strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: Metallic fumes may be produced during welding, burning, grinding, and possibly machining or any situation with the potential for thermal decomposition. Refer to ANSI 249.1

HAZARDOUS POLYMERIZATION: Will not occur

SECTION 11 – Toxicological Information

Contact the address listed on the first page of the Safety Data Sheet for toxicological information on the material and its components

SECTION 12 – Ecological Information

Aquatic Eco toxicological Data - No specific information available on this product.

Environmental Fate Data - No specific information available on this product.

SECTION 13 – Disposal Considerations

WASTE DISPOSAL METHOD: Solids - Sale as Scrap, Dust, Etc. - Follow Federal, State and Local Regulations

SECTION 14 – Transport Information

DOT Proper Shipping Name - Not regulated
DOT Hazard Classification - Not regulated
UN/NA Number - Not applicable
DOT Packing Group - Not applicable
Labeling Requirements - Not applicable
Placards - Not applicable
DOT Hazardous Substance - Not applicable
DOT Marine Pollutant - Not applicable

SECTION 15 – Regulatory Information

This product is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200. However, dusts and fumes from this product may be combustible or hazardous and require protection to comply with applicable Federal, state and local laws and regulations.

California Proposition 65: This product contains chemicals (antimony [oxide], arsenic, beryllium, chromium [hexavalent], cobalt, cadmium, lead, nickel) known to the State of California to cause cancer and chemicals (cadmium, lead) known to the State of California to cause birth defects or other reproductive harm.

Massachusetts Substance List: Aluminum, Antimony, Arsenic, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Hydrochloric acid, Lead, Magnesium, Manganese, Molybdenum, Nickel, Nitrogen, Phosphorus, Selenium, Silicon, Sulfur, Tin, Titanium, Tungsten, Vanadium, Zinc

Pennsylvania Hazardous Substance List: Aluminum, Antimony, Arsenic, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Hydrochloric acid, Lead, Magnesium, Manganese, Molybdenum, Nickel, Nitrogen, Phosphorus, Selenium, Silicon, Sulfur, Tin, Titanium, Tungsten, Vanadium, Zinc

New Jersey Hazardous Substance List: Aluminum, Antimony, Arsenic, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Hydrochloric acid, Lead, Magnesium, Manganese, Molybdenum, Nickel, Nitrogen, Phosphorus, Selenium, Silicon, Sulfur, Tin, Titanium, Tungsten, Vanadium, Zinc

Toxic Substances Control Act (TSCA)

Components of this product are listed on the TSCA Inventory.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

Steel is not reportable, however, it contains hazardous substances that may be reportable if released in pieces with diameters less than or equal to 0.004 inches (RQ marked with a ***).

<u>Chemical Name</u>	<u>Reportable Quantity (in lb.)</u>
Antimony	5000*
Arsenic	1*
Beryllium	10*
Cadmium	10*
Chromium	5000*
Copper	5000*
Lead	10*
Nickel	100*
Phosphorus	1
Selenium	100*
Zinc	1000*

Superfund Amendments and Reauthorization Act of 1986 (SARA), Title III

SECTION 311/312 HAZARD CATEGORIES: Immediate Health Effect, Delayed Health Effect

This product contains the following EPCRA Section 313 chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372):

SECTION 313 REPORTABLE INGREDIENTS:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Concentration (% by weight)</u>	<u>Reportable</u>
Antimony	7440-36-0	<0.9	No -Less than 1%
Arsenic	7440-3S-.2	<0.09	No -Less than 0.1%
Beryllium	7440-43-9	<0.09	No - Less than 0.1%
Cadmium	7440-43-9	<0.09	No - Less than 0.1%
Chromium	7440-47-3	0.01-1.0	Yes -Greater than 0.1%
Cobalt	7440-48-4	<0.09	No - Less than 0.1%
Copper	7440-50-8	<0.9	No - less than 1%
Lead	7439-92-1	0.0-0.04	Yes
Manganese	7439-96-5	0-2	Yes -Gf88ter than 1%
Nickel	7440-02-0	O.OM.O	Yes -Greater than 0.1%
Phosphorus	7723-14-0	<0.9	No - Less than 1%
Selenium	778249-2	<0.9	No - Less than 1%
Vanadium	7440-62-2	<0.9	No - Less than 1%
Zinc	7440- 1&-6	<0.9	NO -less than 1%

Concentrations based on analytical data and process knowledge of typical products distributed by the facility.

SECTION 16 – Other Information

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Maintain good housekeeping procedures to prevent dust accumulation during grinding. Avoid dust inhalation and direct skin contact with dust.

OTHER PRECAUTIONS: Clean up using methods which 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.

Wash hands thoroughly after handling, before eating or smoking. Wash exposed skin at the end of work shift. Do not shake clothing, rags or other items to remove dust. Dust should be removed by washing or vacuuming (with appropriate filters) the clothing, rags or other items.

Periodic medical examinations are recommended for individuals regularly exposed to dust or mist.