PANEL-LOK® STAINLESS STEEL

1. Product Data

Date of Preparation: July 9, 2018
Product Name: STAINLESS STEEL SCREWS
Chemical Name: *Example*; 303; 304; 316; 410
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2. Hazards Identification

Steel products in the natural state do not present an inhalation, ingestion, or contact health hazard. However, operations such as welding, burning, sawing, brazing, grinding, and possibly machining, which results in elevating the temperature of the product to or above its melting point or results in the generation of airborne particulates may present hazards. **The following classification information is for the hazardous elements which may be emitted during these processes.**

Hazardous classification:
Inhalation Toxicity: Acute 4

Hazardous Statements:
H332 Harmful if inhaled

Precautionary Statements:
P261 Do not breathe dust
P271 Use only outdoors or in a well-ventilated area
P312 Call a POISON CENTER or doctor if you feel unwell
P304+P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing

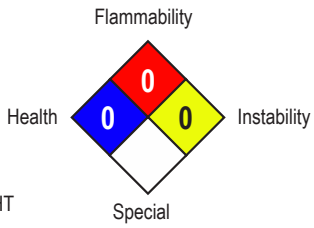
Carcinogenicity: Chromium is a potential carcinogen.

Signal word: Warning

Hazardous Material Information System (HMIS)

Health	1
Flammability	0
Reactivity	0
Personal Protection	

National Fire Protection Association (NFPA)



0 = INSIGNIFICANT 1 = SLIGHT
2 = MODERATE 3 = HIGH 4 = EXTREME

3. Composition

Material	CAS Number	% Weight	OSHA PEL (mg/m3)	ACGIH TLV (mg/m3)
BASE METAL				
Iron (Fe)	7439-89-6	39-81	10 (Fe_2O_3 Fume)	5 (Fe_2O_3 Fume)
ALLOYING ELEMENTS				
Carbon (C)	7440-44-0	0.5 max	None Listed	None Listed
Manganese (Mn)	7439-96-5	10.0 max	5.0 as Mn	1.0 as Mn
Phosphorous (P)	7723-14-0	0.001-0.2	0.1 as P	0.1 as P
Sulfur (S)	7704-34-9	0.001-0.35	13 (Sulfur Dioxide)	5 (Sulfur Dioxide)
Silicon (Si)	7440-21-3	2.0 max	None Listed	None Listed
Chromium (Cr)	7440-47-3	10-27	1.0 as Cr	0.5 as Cr
Nickel (Ni)	7440-02-0	0-22	1.0 as Ni	1.0 as Ni
Selenium (Se)	7782-49-2	0-0.35	0.2 as Se	0.2 as Se
Columbium (Cb)	7440-03-1			
Tantalum (Ta)	7440-25-7	10 x C % W1	5.0 as Ta	5.0 as Ta
Copper (Cu)	7440-50-8	0.04-4	0.2 as Cu	0.2 as Cu
Molybdenum (Mo)	7439-98-7	0-4	5.0 Soluble Compounds	5.0 Soluble Compounds
Aluminum (Al)	7429-90-5	0-2	None Listed	5.0 as Welded Fumes
Titanium (Ti)	7440-32-6	0.70 max	15 (Ti O2)	10 as Total Dust

NOTE: The above listing is a summary of elements used to alloy stainless steel. Various grades of steel will contain different combinations of these elements. Trace elements may also be present in minute amounts.

4. First Aid

Inhalation: Remove to fresh air; if condition continues, consult physician.
Eye Contact: Immediately flush well with running water to remove particulate; get medical attention.
Skin Contact: If irritation develops, remove clothing and wash well with soap and water. If condition persists, seek medical attention.
Ingestion: If significant amounts of metal are ingested, seek medical attention.

5. Fire Fighting Measures

Flammable Limits: Lower: NA Upper: NA
Flash Point: NA
Extinguishing Media: NA

Special Fire Fighting Measures: No data found

Hazardous Combustion Products: No data found

Unusual Fire and Explosion Hazards: None

6. Accidental Release Measures

Use good housekeeping practices to prevent accumulation of dust and to keep airborne dust to a minimum, avoid breathing metal fumes or dust.

7. Handling and Storage

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge.

8. Exposure Controls / Personal Protection

Respiratory: NIOSH approved dust/mist/fume respirator should be used during welding or burning if OSHA PEL or TLV is exceeded

Hands, Arms and Body: Use appropriate clothing such as welders aprons & gloves when welding or burning. Check local codes.

Eyes and Face: Safety glasses should always be worn when grinding or cutting; face shields should be worn when welding or burning.

Other Clothing and Equipment: As required for protection depending on the operation and safety codes.

9. Physical and Chemical Properties

Material *(at normal conditions):* Solid
Appearance and Odor: Gray-Black with Metallic Lustre – Odorless
Acidity / Alkalinity: ph = NA
Melting Point: 2700°F
Boiling Point: NA
Specific Gravity (H2O=1): Approx 8
Solubility in water (% by weight): NA
Vapor Pressure: NA

10. Stability and Reactivity

Stability: Stable
Conditions to Avoid: Non-ventilated areas when cutting, welding, burning or brazing; avoid generation of airborne dust and fumes. **Keep Area Well Ventilated.**
Incompatible Materials: Stable under normal conditions to use, storage and transport. Reacts with strong acids to form hydrogen gas. At temperatures above melting point, metallic oxide fumes may be liberated
Hazardous Decomposition Products: Metallic oxides

11. Toxicological Information

Steel products in the natural state do not present an inhalation, ingestion, or contact health hazard. However, operations such as welding, burning, sawing, brazing, grinding, and possibly machining, which results in elevating the temperature of the product to or above its melting point or results in the generation of airborne particulates may present hazards. The above operations should be performed in well ventilated areas. The major exposure hazard is inhalation.

Effects of Overexposure:

Acute: Excessive inhalation of all metallic fumes and dusts may result in irritation of eyes, nose and throat. Also high concentrations of fumes and ducts of iron-oxide, manganese, copper & selenium may result in metal fume fever. Typical symptoms consist of a metallic taste in the mouth, dryness and irritation of the throat, chills and fever, and usually last from 12 to 48 hours.

Chronic: Chronic and prolonged inhalation of high concentrations of fumes or dust of the following elements may lead to the conditions listed opposite the elements:

Iron (iron-oxide): Pulmonary effects, siderosis

Manganese: Bronchitis, pneumonitis, lack of coordination, central nervous system.

Chromium: Various forms of dermatitis, inflammation and/or ulceration of upper respiratory tract, and possibly cancer of nasal passages and lungs. Based on available information, there does not appear to be any evidence that exposure to welding fume induces human cancer.

Nickel: SAME AS CHROMIUM

Selenium: Nasal and bronchial irritation, gastrointestinal disturbances, garlic odor of breath.

Copper: Pulmonary effects, nasal and paranasal sinus, skin and liver.

Vanadium: May affect lungs. May affect blood pressure as vanadium pentoxide.

Cobalt: Inhalation of cobalt dust may cause an asthma-like disease with cough and dyspnea.

Molybdenum: Pain in joints, hands, knees and feet. Medical conditions generally aggravated by exposure would be dermatitis and pulmonary disease or disorders.

Occupational Exposure Limits:
See Ingredients (Sec. 1) Chromium and Nickel have been identified by the International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP) as potential carcinogens.

12. Ecological Information

No data found

13. Disposal Considerations

Follow federal, state, and local regulations regarding disposal of dust and other debris.

14. Transport Information

No data found

15. Regulatory Information

No data found

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