

This material Safety Data Sheet (SDS) provides information on a specific group of manufactured metal products. Since these metal products share a common physical nature and constituents, the data presented are applicable to all alloys identified. This document was prepared to meet the requirements of OSHA's Hazard Communication Standard, 29 CFR 1910.1200.

## **Section I - PRODUCT IDENTIFICATION & COMPANY INFORMATION**

**Product name:** Various grades of stainless steel, nickel and titanium alloys carrying various trade names and alloy designations in basic mill product forms such as bar, sheet, plate, and pipe.

**Other/generic names:** A list of alloys is provided in the Appendix.

**Product use:** These materials are utilized in a wide variety of applications that typically involve fabrication of the alloys into useful components offering corrosion resistance, strength and a broad range of beneficial characteristics.

**Supplier/Distributor:** Rolled Alloys LP 125 West Sterns Road Temperance, MI 48182

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## **Section II – HAZARDS IDENTIFICATION**

Solid metal alloys are not normally considered hazardous as shipped. Ends and edges can be sharp and gloves should be worn when handling.

### **POTENTIAL HEALTH HAZARDS**

**Skin:** Although not normally hazardous, some individuals can develop allergic skin reactions to nickel and other metallic ingredients. Ends of wire and edges of strips may be sharp and can cause cuts. During welding and spraying - Fumes generated may be irritating to the skin. UV radiation produced can cause burns (ray burn). Hot metal can cause burns.

**Eyes:** As shipped, product does not pose a hazard to the eyes however ends of wire and edges of strip are sharp and can cause cuts. During welding and spraying - Fumes generated can be irritating to the eye. Ends of wire may be sharp and can cause cuts or hot and cause burns. UV radiation produced can cause burns (arc eye).

**Inhalation:** Fumes generated by welding and spraying processes can be irritating and toxic.

**Ingestion:** Not a likely route of entry. Metal ingestion can cause toxic effects.

**Delayed effects:** Inhalation of welding or spraying fumes may cause damage to the lungs and respiratory tract including but not limited to fibrosis of the lung which can reduce lung capacity and produce difficulty breathing.

Cobalt and Nickel are animal carcinogens and inhalation of fumes and dusts should be avoided. Prolonged inhalation of Manganese fumes and dusts may cause irreversible damage to the nervous system resulting in Parkinson's Disease-like symptoms (tremors, weakness, paralysis, etc.)

### Section III – COMPOSITION / INGREDIENTS<sup>1</sup>

**IMPORTANT** – This section lists hazardous ingredients in the as-shipped products.

INGREDIENT	Max Wt. %	PEL <sup>2</sup>	TLV <sup>3</sup>	CAS# <sup>4</sup>
Aluminum (Al)	6	15	10	7429-90-5
Chromium (Cr) (metal)	33	1	0.5	7440-47-3
Cobalt (Co)	66	0.1	0.02	7440-48-4
Copper (Cu)	34	1	1	7440-50-8
Iron (Fe) as Dust or Fume	99	10	5	7439-89-6
Manganese (Mn)	16	C5	0.2	7439-96-5
Molybdenum (Mo)	30	15	10	7439-98-7
Nickel (Ni)	99	1	1.5*	7440-02-0
Niobium (Nb)	6	15	10	03/01/7440
Silicon	4	15(5*)	10	7440-21-3
Titanium (Ti) as Dust or fume	90	15(5*)	10	7440-32-6
Tungsten (W)	5	5(STEL-10)	5	7440-33-7
Vanadium (V)	4	C0.5	0.05	7440-62-2

Nuisance particulates as respirable dust at 5mg/m<sup>3</sup> (\*Respirable Fraction) (C = Ceiling Limit) (STEL – Short Term Exposure Limit)

1 - Composition of HAZARDOUS INGREDIENTS (as defined by OSHA – 29CFR1910.1200 and PA TITLE 34) – 1% or greater by weight, except 0.01% or greater for nickel and chromium.

2 - OSHA Permissible Exposure Limits (mg/m<sup>3</sup>)

3 - Threshold Limit Value (mg/m<sup>3</sup>), American Conference of Governmental Industrial Hygienist (ACGIH)

Both PEL and TLV are 8 hour Time Weighted Averages (TWA), unless designated as C (ceiling limits)

4 - Chemical Abstract Services Number

### Section IV – FIRST AID MEASURES

**Skin:** Wash skin with soap and water to remove any metallic particles. If a rash or burn develops, seek medical attention.

**Eyes:** Flush particles from eyes with clean water for at least 15 minutes. If irritation persists or burn develops, seek medical attention.

**Inhalation:** Remove from exposure. If respiratory irritation persists, seek medical attention.

**Ingestion:** If metallic particles are swallowed, seek medical assistance.

**Advice to physician:** Treat symptomatically















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410 UNS: S41000  
446 UNS: S44600  
303\* UNS: S30300  
304/304L\* UNS: S30400, S30403  
17-4 UNS: S17400  
A-286 UNS: S66286  
Zeron®100 S32760

410S UNS: S41008  
317L UNS: S31703  
304/304H UNS: S30400, S30409  
316/316L\* UNS: S31600, S31603  
15-5 UNS: S15500  
  
13-8 UNS: S13800

\* 303, 304/304L, 316/316L are also featured as Rolled Alloys Machining Quality Bar, also known as RAM\*

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