



Material Safety Data Sheet  
 For chemical Products in accordance with Regulation 1907/2006/EC

**Trade Name:** Non-stainless Carbon Strip steel

**Date:** March 2020

<b>1 Section 1 - Identification</b>	
<b>1a Description of the Product*</b>	Cold rolled flat steel product of low alloyed carbon steel annealed or temper rolled or tempered Grades: 1075, 1075(mod), 1095, 4150(mod), 1050, 6150, 1085, and 1.25C
<b>1b Product Applications</b>	Metallic semi finished product in the form of steel strip in coils or cut to length strip for further processing in different products esp. knives, springs, saws or different stamped parts.
<b>1d Manufacturer/Supplier Data</b>	voestalpine Precision Strip LLC - Wisconsin 7888 102nd Street, Pleasant Prairie, WI 53158 Danielle.granlund@voestalpine.com
<b>1e Emergency Telephone Numbers</b>	voestalpine Precision Strip LLC -WI (262) 947-5800

<b>2 Section 2 - Hazards Identification</b>			
<b>2a Classification of the chemical: Carbon Strip Steel</b> products manufactured by voestalpine Precision Strip LLC- WI ARE NOT HAZARDOUS PER OSHA GHS, 29 CFR 1910.1200. However, individual customer processes, (such as welding, sawing, brazing, grinding, abrasive blasting and machining) may result in the formation of fumes, dust (combustible or otherwise), and/or particulate that may present the following hazards. The categories of Health Hazards as defined in " <u>GLOBALY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS), Third revised edition ST/SG/AC.10/30/Rev. 3</u> " United Nations, New York and Geneva, 2009 have been evaluated. Carbon Strip steel is considered an article under Reach regulation (REACH REGULATION (EC) No 1907/2006) and is not subject to classification under CLP regulation (REGULATION (EC) No 1272/2008). Not a dangerous product in accordance with EU Directive 67/548/EEC as amended Directive 2001/59/EC and regulation No. 1272/2008/EC.			
<b>2b Signal word, hazard statement(s), symbols and precautionary statement(s):</b>			
<b>Hazard Symbol</b>	<b>Hazard Classification</b>	<b>Hazard Statement(s)</b>	<b>Precautionary Statement(s)</b>
	Carcinogenicity – 2	Dust/Fumes suspected of causing cancer via inhalation.	Avoid breathing dust and fumes
	Skin Sensitization – 1	Dust/Fumes may cause and allergic skin reaction	
	Target Organ Toxicity (STOT) Repeat Exposure – 1	Repeated /prolonged exposure to dust/fumes may cause damage to respiratory system.	Use personal protective equipment as required
<ul style="list-style-type: none"> <li>• <b>Eye Contact:</b> Dusts may cause mechanical irritation or scratching of the cornea. Fumes may irritate the eyes.</li> <li>• <b>Skin Contact:</b> Dusts may cause mechanical irritation. Some components are capable of causing an allergic reaction. Heated can cause burns.</li> <li>• <b>Inhalation:</b> Dusts may irritate the nose, throat and lungs. Excessive exposure to metal fumes can cause metal</li> </ul>			

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fume fever.

- **Ingestion:** Not expected to be acutely toxic via ingestion
- **Chronic Effects:** Repeated exposure to dusts may cause changes to nose, throat and lungs. Contains substances that may cause cancer and have reproductive effects. The following ingredients are listed by NTP, IARC, and OSHA as carcinogens: Nickel, chromium, cobalt, lead and arsenic.

### 2c Hazards not otherwise classified:

When the packing of the steel strip is not carefully opened, released tension may lead to lacerations or eye injuries.

### 2d Unknown acute toxicity statement (mixture):

None Known

## 3 Section 3 - Composition/Information on Ingredients

### 3a-c Chemical name, common name, CAS number and other identifiers and concentration:

Chemical Name	EC No	CAS No	Weight-%
Iron	231-096-4	7439-89-6	Balance
Silicon	231-130-8	7440-21-3	0.1-1.5
Manganese	231-105-1	7439-96-5	0.1-2.5
Chromium	231-157-5	7440-47-3	0-8.0
Molybdenum	231-107-2	7439-98-7	0-2.5
Nickel	231-111-4	7440-02-0	0-1.0
Vanadium	231-171-1	7440-62-2	0-0.5
Tungsten	231-143-9	7440-33-7	0-2.2
Cobalt	213-158-0	7440-48-4	0-0.1
Carbon	231-153-3	7440-44-0	0.2-1.3
Aluminum	231-072-3	7429-90-5	0-0.1
Copper	231-159-6	7440-50-8	0-0.5

EC- European Community

CAS - Chemical Abstract Service

## 4 Section 4 - First-Aid Measures

### General Notes:

First-aid measures are only necessary when dust or vapors are produced during processing of the steel strip (welding, grinding, etc.) and these are inhaled or ingested.

### After Inhalation:

When dust or vapor is inhaled, provide sufficient fresh air and obtain competent medical assistance.

### After Skin Contact:

Wash off with water and soap and rinse well. Damage to the skin is not likely.

### After Eye Contact:

Rinse thoroughly with water for several minutes and obtain competent medical assistance.

No material specific precaution necessary. Immediately rinse out eye for at least 10 minutes with running water.

### After Ingestion:

Thoroughly rinse mouth with water and drink water in small amounts, obtain competent medical assistance.



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**Possible Symptoms and Effects:**

None

**5 Section 5 - Fire-fighting Measures****Suitable Extinguishing Media:**

Product is non-combustible, flammable as finely dispersed particles. Use extinguishing media in adaption to materials stored in the immediate neighborhood.

**Unsuitable Extinguishing Media for Safety Reasons:**

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

**Special Dangers of Product, Combustion Products or Gases:**

Inclusion in a combustion may cause alluring products of decomposition

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 flames. Prevent dust accumulations to minimize combustible dust hazard.

**Special Protection Equipment for Fire Fighting:**

Self-contained breathing apparatus

**Additional Instructions:**

None

**6 Section 6 – Accidental Release Measures**

No protective measures are required for the product in supplied form.

**Personal Protection Measures:**

No special measures are required for the product in supplied form.

**Environmental Protection Measures:**

No special measures are required for the product in the supplied form. Dust should not be allowed to enter drains, surface water or ground water. Any contaminated water must be disposed of properly. Governmental authorities must be notified if any dust enters drains, surface water or ground water.

**Cleaning Methods:**

Follow applicable OSHA regulations (29 CFR 1910.120) and all other pertinent state and federal requirements. No special measures are required for the product in supplied form.

**7 Section 7 - Handling and Storage****7a Instructions for Safe Handling:**

Suitable equipment must be used to exhaust vapors or grinding dust while processing steel strip. Sufficient ventilation must be provided (see Section 8). If thermal and/or mechanical machining install offtake at the workplace/machine, further on air ventilation.

**Instructions for Fire and Explosion Protection:**

No special protective measures are required for the product in the supplied form  
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



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away from all ignition sources including heat, sparks, and flame. Prevent dust accumulations to minimize combustible dust hazard.

**Classification of Temperatures and Fires:**

No data are available for steel strips in their supplied forms.

**7b Storage**

**Requirements for Storage Rooms and Containers:**

Dry storage. No specific requirements.

**Storage Classification:**

Storage Class LGK 13, acc. To VCI (Verband der chemischen Industrie e.V.)

Solid and packaging not a fire hazard.

Store away from acids and incompatible materials.

**8 Section 8 - Exposure Controls and Personal Protection**

**8a Occupational Exposure Limits (OELs):** Carbon Strip Steel as sold/shipped in its physical form does not present an inhalation, ingestion, or contact hazard. Nor would any of the following exposure data apply. However, operations such as burning, welding (high temperature), sawing, brazing, machining, grinding, etc. may produce fumes and/or particulates.

**8b Appropriate Engineering Controls:** Use controls as appropriate to minimize exposure to metal fumes and dusts during handling operations. Provide general or local exhaust ventilation systems to minimize airborne concentrations. Local exhaust is necessary for use in enclosed or confined spaces. Provide sufficient exhaust ventilation to control inhalation exposures below current exposure limits.

**8c Personal Protective Equipment**

**General Protection and Hygiene Measures:**

No special measures are required for the product in supplied form.

Eating, drinking, smoking, chewing tobacco and keeping food is prohibited at the workplace.

**Respiratory Protection:**

Particle filter, filter grade P2 or P3, dependant on intensity of exposure

**Hand Protection:**

Safety gloves protecting against mechanical and chemical (oily products) dangers

**Eye Protection:**

Safety goggles or other adequate eye protection may be required during processing (grinding, cutting, welding, etc.).

**Personal Protection:**

Protective clothing may be required for certain work activities.

**9 Section 9 - Physical and Chemical Properties**

<b>9a</b>	Form, appearance:	solid, metallic
<b>9b</b>	Smell:	Odorless
<b>9c</b>	Odor threshold:	NA
<b>9d</b>	pH value:	Not applicable.
<b>9e</b>	Melting point/melting range:	1350 - 1510°C (2460-2750°F)
<b>9f</b>	Boiling point/boiling range:	No data available.
<b>9g</b>	Flash point:	Not applicable
<b>9h</b>	Evaporation Rate:	Not applicable
<b>9i</b>	Flammability:	Not applicable.






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<b>9j</b>	Ignition temperature:	No.
<b>9k</b>	Vapour pressure:	No data available.
<b>9l</b>	Vapour Density (air=1)	Not applicable
<b>9m</b>	Relative Density:	7.8 to 8.0 g/cm <sup>3</sup>
<b>9n</b>	Water solubility:	insoluble
<b>9o</b>	Partition Coefficient n-octanol/water:	Not determined
<b>9p</b>	Spontaneous combustibility:	No.
<b>9q</b>	Decomposition Temperature:	Not determined
<b>9r</b>	Viscosity:	Not applicable.

**10 Stability and Reactivity****10(a) Reactivity:** Not Determined for product in a solid form. Do not use water on molten steel**10(b) Chemical Stability:** Stable when used as intended.**10(c) Possibility of hazardous reaction:** None known**10(d) Conditions to avoid:** Storage with strong acids or calcium hypochlorite**10(e) Incompatible materials:** Will react with strong acids to form hydrogen. Iron oxide dusts in contact with calcium hypochlorate evolve oxygen and may cause an explosion**10(f) Hazardous Decomposition Products:** Thermal oxidative decomposition of steel products can produce fumes containing oxides of iron and manganese as well as other alloying elements**11 Toxicology****11 Information on toxicological effects:**

The following toxicity data has been determined for cold rolled steel when further processed using the information available for its components applied to the guidance on the preparation of an SDS under the GHS requirements of OSHA and the EU CPL

Hazard Classification	Hazard Category OSHA	Hazard Symbols	Signal Word	Hazard Statement
<b>Eye Damage / Irritation</b> (Categories 1, 2A & 2B)	2B	No Pictogram	<b>Warning</b>	Causes eye irritation - Rating due to iron particulate generated from further processing (welding, grinding, burning, etc)
<b>Skin / Dermal Sensitization</b> (Category 1)	1		<b>Warning</b>	May cause an allergic skin reaction - Nickel is a skin sensitizer
<b>Carcinogenicity</b> (Categories 1A, 1B & 2)	2		<b>Warning</b>	Suspected of causing cancer - Rating due to nickel particulate or fume that can enter the body generated when further processed (welding, grinding, burning, etc)
<b>Toxic Reproduction</b> (Categories 1A, 1B & 2)	2		<b>Warning</b>	Suspected of damaging fertility or the unborn child - Rating due to nickel particulate or fume that can enter the body generated when further processed (welding, grinding, burning, etc)
<b>Specific Target Organ Toxicity (STOT) Following Single Exposure</b> (Categories 1-3)	3		<b>Warning</b>	May cause respiratory irritation - Rating due to iron particulate or fume that can enter the body when further processed
<b>STOT following Repeated Exposure</b>	1		<b>Danger</b>	Causes damage to lungs and central nervous system through prolonged or repeated inhalation exposure - Rating due to nickel or manganese particulate or fume that can enter the body generated when further processed (welding, grinding, burning,

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**11 Information on Toxicological Information (continued)**

Not Applicable – Semi-formed steel products are considered articles under Reach regulation (REACH REGULATION (EC) No 1907/2006) and are not subject to classification under CLP regulation)

The primary components of this product is Iron. Long-term exposure to iron dusts or fumes can result in a condition called siderosis which is considered to be a benign pneumoconiosis. Iron and steel founding but not iron or iron oxide has been listed as carcinogenic.

Breathing fumes or dusts of this product may result in metal fume fever, which is an illness produced by inhaling metal oxides. These oxides are produced by heating various metals including cadmium, zinc, magnesium, copper, antimony, nickel, cobalt, manganese, tin, lead, beryllium, silver, chromium, aluminum, selenium, iron, and arsenic. The most common agents involved are zinc and copper.

This product may contain small amounts of manganese. Prolonged exposure to manganese dusts or fumes is associated with „manganism“, a Parkinson–like syndrome characterized by a variety of neurological symptoms including muscle spasms, gait disturbances, tremors, and psychoses.

This product may contain small amounts of chromium. Prolonged and repeated over-exposure to chromium dusts or fumes may cause skin ulcers, nasal irritation and ulceration, kidney damage and cancer of the respiratory system. Chromium is a skin sensitizer. Cancer is generally attributed to hexavalent(+6) form of chromium which is listed as a carcinogen by NTP and IARC (Group 1).

This product may contain small amounts of nickel. Prolonged and repeated contact with nickel may cause sensitization dermatitis. Inhalation of nickel compounds has caused lung damage as well as sinus, nasal, and lung cancer in laboratory animals. Nickel is listed as a carcinogen by NTP and IARC (Group 1).

This product may contain small amounts of lead .Lead can accumulate in the body. Consequently, exposure to fumes or dust may produce signs of polyneuritis, diminished vision and peripheral neuropathy, such as tingling and loss of feeling in fingers, arms, and legs. Lead is a known reproductive and developmental toxin. It is also associated with central nervous system disorders, anemia, kidney dysfunction, and neurobehavioral abnormalities. The brain is a major target organ for lead exposure. Elemental lead is listed as an IARC 2B carcinogen

The product may contain small amounts of copper. Copper dust and fumes can irritate the eyes, nose and throat causing coughing, wheezing, nosebleeds, ulcers and metal fume fever. Other effects from repeated inhalation of copper fumes include a metallic or sweet taste and discoloration of skin, teeth or hair. Copper may also cause an allergic skin reaction. Overexposure to copper can affect the liver.

**Carcinogenicity**

Chemical Name	ACGIH	IARC	NTP	OSHA
Nickel 7440-02-0		Group 1 Group 2B	Known Reasonably Anticipated	X
Chromium 7440-47-3		Group 3		

**Sensitization**

May cause sensitization by skin contact.

Short exposition to higher concentration of dust/smoke may cause irritation of the airways.

**Chronic Toxicity:**

Not available.

**Additional Toxicological Information:**

If the product is handled appropriately no toxic effects are to be expected

**12 Ecology**

**12 Additional Information:**

**Hazard Category:** Not Reported

**Hazard Symbol:** No Symbol

**Hazard Statement:** No statement

**Signal Word:** No signal word

Steel strips in their supplied form do not pose any threat to the environment. In the event of a fire it is important to ensure that none of the extinguishing water enters drains, ground water or surface water.

**Mobility and Bioaccumulation Potential**

Not applicable in the supplied form.

**Persistence and Degradability**

Not applicable in the supplied form. Heavy metals remain in the environment as a result of their elemental character. These substances can only be stored in less dangerous, more effectively controlled compartments in order to prevent them from entering the biosphere.

**Other dangerous effects**

Iron (III) is immobile (insoluble) in highly oxygenated water, while Ni (II) is soluble. Dissolved nickel in normal concentrations is not poisonous in potable water. Intestinal problems and brain damage do not occur unless concentrations reach a very high level. Allergic reactions to nickel (skin contact) seem to have no significance in potable water.

**13 Disposal Considerations**

**Product Disposal:**

Residues and by-products incurred during the processing of these steel sheets and strips are to be recycled (R4 recycling/recovery of metals and metal compounds).

**Waste code (in accordance with OENORM S 2100):**

35103 Iron and steel waste

**Waste code (in accordance with EWC):**

191001 Iron and steel waste

**Additional Instructions:**

Product residues may not be disposed of in household waste. Do not allow these materials to enter drains, surface water or ground water.

**14 Transportation Information**

**DOT Proper Shipping Name** – Not Regulated

**DOT Hazard Classification** – Not applicable

**UN/NA Number** – Not applicable

**DOT Packaging Group** – Not applicable

**Labelling Requirements** – Not applicable

**Placards** – Not applicable

**DOT Hazardous Substance** – Not applicable.

**DOT Marine Pollutant** – Not applicable



**15 Regulatory Information**

**Regulatory Information**

*The following listing of regulations relating to voestalpine Precision Strip LLC – WI product may not be complete and should not be solely relied upon for all regulatory compliance responsibilities.*

**OSHA Regulations:**

Air Contaminant (29 DFR 1910.1000, Table Z-1, Z-2, Z-3): The product Tempered Strip Steel as a whole is not listed. However, individual components of the product are listed: Refer to section 8, Exposure Controls and Personal Protection

**EPA Regulations:**

The product Tempered Strip Steel as a whole is not listed. However, individual components of the product are listed: Manganese, Nickel, Aluminum

**State Regulations:**

The product Tempered Strip Steel as a whole is not listed. However, individual components of the product are listed in various state regulations:

**Pennsylvania Right to Know:** Contains regulated material in the following categories:

*Hazardous Substances:* Aluminum, Manganese, Nickel, Silicon

*Environmental Hazards:* Aluminum, Manganese, Nickel

*Special Hazardous Substance:* Nickel

**California Prop 65:** This product can expose you to chemicals including nickel (metallic) which is known to the State of California to cause cancer. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

**New Jersey:** Contains regulated material in the following categories:

*Hazardous Substance:* Aluminum, Manganese, Molybdenum, Silicon, Nickel

*Environmental Hazards:* Manganese, Nickel

*Special Hazardous Substance:* Aluminum, Manganese, Silicon

**Minnesota:** Manganese, Nickel

**Massachusetts:** Aluminum, Manganese, Silicon, Nickel

**16 Other Information**

This safety data sheet has been produced in line with Annex II of the REACH Regulation EC 1907/2006. Information in this safety data sheet was collected and used where necessary from the work done to produce a REACH Registration dossier and Chemical Safety Report.

**Additional Information:**

All data reflect the current status of our experience and knowledge. The data are intended to describe our product with regard to safety issues, however, they do not guarantee any product properties.

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of product properties. This is a finished product.

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Revision 1