



**EC-Material Safety Data Sheet**

for chemical Products in accordance with Regulation 1907/2006/EC

**Trade Name:** Hot rolled and cold rolled flat steel products without Surface Refinement **Date:** 07.05.2012

<b>1 Identification of the product and of the company undertaking</b>	
<b>1.1 Description of the Product*</b>	Hot rolled and cold rolled flat steel products without surface refinement, nickel and chromium content < 1%, furnished with corrosion inhibition oil
<b>1.2 Product Applications</b>	Metallic semi finished product in the form of flat steel for further processing in different products.
<b>1.3 Manufacturer/Supplier Data</b>	voestalpine Stahl GmbH voestalpine-Strasse 3, A-4020 Linz, Austria christoph.angermayer@voestalpine.com
<b>1.4 Emergency Telephone Numbers</b>	Poison Information Center in Vienna +43 / 1 / 4064343

<b>2 Hazards Identification</b>	
<b>2.1 Designation of Possible Dangers*</b>	<p>Not a dangerous product in accordance with EU Directive 67/548/EEC as amended Directive 2001/59/EC and regulation No. 1272/2008/EC.</p> <p>The steel products listed in chapter 1.1 are blank metal and so are not hazardous by inhalation, skin contact and swallowing. The alloy components listed in chapter 2 are metallic bound. Health hazards have to be considered if smoke/dust is generated while working with the material.</p> <p>Mechanical or thermal processing (e.g. welding, decollating, grinding) can cause smoke or dust, which can be hazardous when inhaled. (See limits in chapter 8).                      Handling of the product can cause cut-wounds.</p> <p><b>Corrosion inhibition oil:</b>                      Harmful for waterorganisms, for longer periods it can be harmful for waters. May contain Aryl-Di-Alkylphosphite or sulphonicacid, petroleum, calciumsalt. May cause allergic reactions.</p>
<b>2.2 Special dangers to Humans and the Environment</b>	No data
<b>Additional Information</b>	When the packing of the steel strip is not carefully opened, released tension may lead to lacerations or eye injuries.

**3 Composition/Information on Constituents\***

**3.1 Article**

**Description**

Hot rolled and cold rolled flat steel products without surface refinement, nickel and chromium content < 1%, furnished with corrosion inhibition oil

**Ingredients – Composition**

Alloyed / unalloyed steel, nickel and chromium content < 1%, galvanised (may contain iron or aluminium)

EG and CAS-No.	name	according to 67/548/EEC	according to 1272/2008/EC	% - [mass]
CAS: 7439-96-5 EINECS: 231-105-1	manganese	---	---	< 6,5 %
CAS: 7440-02-0 EINECS: 231-111-4	nickel	Carc. Cat. 3; T; R40-R48/23-R43	Skin Sens. 1 - H317 Carc. 2 - H351 STOT RE 1 - H372 Aquatic Chronic 3 - H412	< 1 %
CAS: 7440-47-3 EINECS: 231-157-5	chromium	---	---	< 1 %
CAS: 7439-98-7 EINECS: 231-107-2	molybdenum	---	---	< 16,5 %
CAS: 7429-90-5 EINECS: 231-072-3	aluminia	---	---	< 1,1 %

Plated corrosion inhibition oil:

	name	according to 67/548/EEC	according to 1272/2008/EC	% - [mass]
	Na-sulfonate	Xi; R 36	Eye irritation 2 - H319	2,5 - 5 %
	aryldialkylphosphite	Xi, N; R 36/37/38-43- 50/53	Skin Irrit. 2 - H315 Skin. Sense 1 - H317 Aquatic Chronic 1 - H410	< 1 %
	ethoxylat	Xi, N; R 41-51/53	Eye dam. 1 - H318 Aquatic Chronic 2 - H411	< 1 %

**4 First-Aid Measures**

**General Notes:**

First-aid measures are only necessary when dust or vapors are produced during processing of the steel sheets (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.

**4 First-Aid Measures****After Ingestion:**

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

**Possible Symptoms and Effects:**

None

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

Product is non-combustible, except that oil is inhered. The plated zinc layer is combustible. Use extinguishing media in adaption to materials stored in the immediate neighborhood.

**Unsuitable Extinguishing Media for Safety Reasons:**

None

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

Inclusion in a combustion may cause alluring products of decomposition

**Special Protection Equipment for Fire Fighting:**

Self-contained breathing apparatus

**Additional Instructions:**

None

**6 Measures to Take When Unintentionally Released**

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:**

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

**7 Handling and Storage****7.1 Handling****Instructions for Safe Handling:**

Suitable equipment must be used to exhaust vapors or grinding dust while processing steel sheets. 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.

**Classification of Temperatures and Fires:**

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

**7 Handling and Storage**

**7.2 Storage**

**Requirements for Storage Rooms and Containers:**

Dry storage. No specific requirements.

**Joint or Mixed Storage:**

Not applicable.

**Storage Classification:**

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

Solid and packaging not a fire hazard.

**8 Exposure Controls and Personal Protection**

**8.1 Limit Values for Work Protection**

**Exposure Limit Values:**

CAS No.	Substance	Unit	MWC Values		Duration [ min ]	Frequency per Shift
			DMV	MV		
	Suspended biologically inert matter (dust) in accordance with Section 5 of GKV 2007	mg/m <sup>3</sup>	15 (i) 6 (a)	30 (i)		
7439-89-6	Iron (Fe)	mg/m <sup>3</sup>				
7440-02-0	Nickel (Ni) as dust	mg/m <sup>3</sup>	0,5 (i)	2 (i)	15 (MeV)	4 x
7429-90-5	Aluminum (Al) as metal	mg/m <sup>3</sup>	10 (i)	20 (i)	60 (MeV)	2 x
7439-96-5	Manganese (Mn)	mg/m <sup>3</sup>	0,5 (i)	2 (i)	15 MeV	4 x
7440-47-3	Chromium (Cr) as metal	mg/m <sup>3</sup>	2			
7439-98-7	Molybdenum (Mo)	mg/m <sup>3</sup>	10 (i)	20 (i)	60 (MeV)	2 x
7440-50-8	Copper (Cu)	mg/m <sup>3</sup>	1 (i)	4 (i)	15 (MeV)	4 x
	Copper (Cu) as vapor	mg/m <sup>3</sup>	0,1 (i)	0,4 (i)	15 (MeV)	4 x
7440-62-2	Vanadium (V)	mg/m <sup>3</sup>	0,5 (i)	1 (i)	15 (MeV)	4 x
7440-33-7	Tungsten (W)	mg/m <sup>3</sup>	5 (i)	10 (i)	15 (MeV)	4 x

- DMV ... Daily mean value (a) ... Alveolar fraction
- MV ... Momentary value (i) ... Inhalable fraction
- MeV ... Mean value throughout observation period
- MoV ... Momentary value
- MWC-Value Maximum Workplace Concentration
- TSC-value Technical standard concentration

Source: 2007 Limit Values Directive – GKV (Grenzwertverordnung) 2007 (Federal Codex II No. 243/2007)  
Substance list (MWC and TSC values), Appendix I/2007

**Additional Instructions:**

The above mentioned MWC values in the above table refer to high-purity substances. The MWC values will not be exceeded by the product in supplied form because the product consists of alloys. The limit value for suspended biologically inert matter (dust) may also be exceeded during mechanical processing of the steel strips (grinding, cutting, milling, etc.).

**8 Exposure Controls and Personal Protection****8.2 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 Physical and Chemical Properties****9.1 General Information**

Form, appearance: solid, metallic

Smell: Odorless

**9.2 Important information on health and environmental protection and safety**

pH value: Not applicable.

Flammability: Not applicable.

Melting point/melting range: approx. 1400 - 1500°C (steel)

Boiling point/boiling range: No data available.

Flash point: of the corrosion inhibition oil: > 100°C

Ignition temperature: No.

Spontaneous combustibility: No.

Flame-promoting properties: No.

Danger of explosion: Not explosive.

Vapor pressure: No data available.

Water solubility: the adherent oil is insoluble or just a bit soluble in water

Viscosity: Not applicable.

Specific weight: 7.7 to 8.1 g/cm<sup>3</sup> (steel)

**9.3 Additional Information**

None

**10 Stability and Reactivity****10.1 Stability**

Stable when used as intended.

**10.2 Conditions to be avoided**

Exposition to air or water may cause corrosion.

**10.3 Substances to be avoided**

Contact with acids may cause hydrogen formation. Contact with diluted acids, alkaline solutions and salts leads to dissolution products (dependent on durability of contact).

**10 Stability and Reactivity****10.4 Dangerous decomposition substances**

No decomposition when used as intended.

**11 Toxicology****11.1 Acute Toxicology**

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

**11.2 Toxicological Information****Acute Effects:**

Corrosion inhibition oil may cause skin irritation by sensitive persons. Eye contact causes irritation. 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****12.1 General Information**

Steel sheets and 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.

**12.2 Mobility and Bioaccumulation Potential**

Not applicable in the supplied form.

**12.3 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.

**12.4 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 Instructions****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

**13 Disposal Instructions****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 Instructions****Land transportation ADR/RID and GGVS/GGVE (cross-border/domestic):**

Not a dangerous product.

**Inland vessel transportation ADN/ADNR:**

Not a dangerous product.

**Ocean vessel transportation IMDG/GGVSee:**

Not a dangerous product.

**Air transportation ICAO-TI and IATA-DGR:**

Not a dangerous product.

**15 Regulations****Labeling in accordance with CE guidelines:**

The product is not dangerous in the supplied forms. The product must not be classified or labelled in accordance with EU Directive 67/548/EEC as amended Directive 2001/59/EC or regulation No. 1272/2008/EC.

**Danger Symbols and Designation of Danger:**

none

**National Regulations:**

German Regulations: water pollution class (corrosion inhibition oil): 2, hazardous to waters (VwVwS 1999) TRGS 900 Nr. 2.4; Abs. 10: If dust concentration of 3 mg/m<sup>3</sup> (A-dust) can not be maintained at the workplace, labour medical preventative medical check up for the employees have to be arranged.

**16 Other Information****16.1 Listing of the R- and S-phrases (Risk and safety phrases)****R-phrases:**

- R 36 Irritating to eyes.
- R 36/37/38 Irritating to eyes, respiratory system and skin.
- R 36/38 Irritating to eyes and skin
- R 40 Limited evidence of a carcinogenic effect.
- R 41 Risk of serious damage to eyes.
- R 43 May cause sensitisation by skin contact.
- R48/23 Toxic: danger of serious damage to health by prolonged exposure through inhalation.
- R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

