



Hot Rolled Dry and Pickled Coils and Strips



Release 1 - Date 4.08.2014

Manufacturer: ILVA S.p.A.
Address: Viale Certosa n. 239, 20151 Milano
Telephone: +39 02 300351

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 PRODUCT IDENTIFICATION

Designation: Hot Rolled Dry & Pickled Coils and Cut Lengths
Standard: EN 10025, EN 10028, EN 10111, EN 10149, EN 10207, EN 10208

1.2 RELEVANT IDENTIFIED USES

Main applications: Structural Steels, Pressure vessels, Cold Forming, Cylinders, Pipelines

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

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1.4 EMERGENCY TELEPHONE NUMBER

Emergency phone number: + 39 099 4813333
First Aid phone number: + 39 099 4812222
Niguarda Hospital, National Poison Control Centre, Milan: +39 02 66101029

2. HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE PRODUCT

The product is considered an article without intended release of substances under REACH Regulation n. 1907/2006 and it is not classified under CLP Regulation n. 1272/2008

2.2 LABEL ELEMENTS

None



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2.3 OTHER HAZARDS

Under normal operating conditions the steel in massive form does not pose any risk to human health. However, dust, vapours and fumes may be released when performing mechanical or thermal processing such as thermal cutting, grinding, welding, etc.

Inhaling air with particles concentration above the allowed threshold limit, may be hazardous to human health. During such manufacturing activities and in those cases where the product bears a surface protective fluid a protracted exposure to high concentrations of vapours may cause dizziness, headache and irritate eyes, nose and throat

Frequent and prolonged contact with skin can also cause skin irritation.

3. COMPOSITION INFORMATION ON INGREDIENTS

MAIN ELEMENTS – STEEL SUBSTRATE

COMPONENTS	FORMULA	(%) BY MASS	CAS No.	EINECS No.	HAZARD SYMBOL/ R PHRASE (DIR 67/548/CEE)	HAZARD SYMBOL/ H PHRASE (EU REG No. 1272/2008)
IRON	Fe	96-99.8	7439-89-6	231-096-4	-	-
CARBON	C	<0.25	7440-44-0	231-153-3	-	-
SILICON	Si	<0.75	7440-21-3	231-130-8	-	-
MANGANESE	Mn	<1.70	7439-96-5	231-105-1	-	-
PHOSPORUS	P	<0.15	7723-14-0	231-768-7	F R11 R16 R52/53	Flam sol.1 H228
SULFUR	S	<0.045	7704-34-9	231-722-6	Xi R38	Aquatic chronic 3 H412
COPPER	Cu	<0.045	7440-50-8	231-159-6	-	-
NICKEL	Ni	<0.65	7440-02-0	231-111-4	Carc.Cat.3, R40 T R48/23 R43	Carc. 2 H351 STOT RE 1 H372 Skin Sens. 1 H317
CHROME	Cr	<1.25	7440-47-3	231-157-5	-	-
MOLYBDENUM	Mo	<0.10	7439-98-7	231-107-2	-	-
NIOBIUM	Nb	<0.09	7440-03-1	231-113-5	-	-
VANADIUM	V	<0.20	7440-62-2	231-171-1	-	-
ALUMINUM	Al	<0.10	7429-90-5	231-072-3	-	-
TITANIUM	Ti	<0.15	7440-32-6	231-142-3	-	-
BORON	B	<0.005	7440-42-8	231-151-2	-	-

SURFACE PROTECTIVE COATING

The rolled strips may be subject to oiling for the protection of the finished product

Normally, for such specific purpose, protective fluids made of paraffin mineral oils are used



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4. FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

Inhalation: there is no likely form of exposure in the condition the product is usually commercialized; however in case of excessive exposure to dust, vapour or fumes resulting from operations such as cutting, grinding and welding tasks, the affected person has to be moved to fresh air. If symptoms persist call a doctor

Skin contact: there is no likely form of exposure in the condition the product is usually commercialized. However in case of irritation due to excessive exposure to vapours or fumes resulting from cutting, grinding and welding tasks remove contaminated clothes and wash well with soap and plenty of water. Decontaminate clothing before re-using. If irritation persists, call a doctor

Eye contact: there is no likely form of exposure in the condition the product is usually commercialized. However should the eyes become irritated due to excessive exposure to vapours or fumes resulting from cutting, grinding and welding tasks rinse them immediately under running water and for a long time

Ingestion: there is no likely form of exposure in the condition the product is usually commercialized. However in case of excessive exposure to vapours or fumes resulting from cutting, grinding and welding tasks and ingestion and in case of ingestion and sickness call a doctor. Wash out the mouth with water

4.2 MOST IMPORTANT SYMPTOMS AND EFFECT, BOTH ACUTE AND DELAYED

Inhalation: there is no likely exposure in the form the product is usually placed on the market.

Skin contact: there is no likely exposure in the form the product is usually placed on the market.

Eye contact: there is no likely exposure in the form the product is usually placed on the market.

Ingestion: there is no likely exposure in the form the product is usually place on the market.

However during subsequent processing stages such as welding, grinding and cutting, single components may cause an acute or chronic effect. on human health. Please refer to Section 11 Toxicological Information.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

None that is known

5. FIREFIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

Not applicable to hot rolled products in the form they are normally commercialized. Use fire- extinguishing-media that are appropriate to the type of materials nearby

5.2 SPECIAL HAZARDS ARISING FROM THE PRODUCT

Not applicable to hot rolled products in the form they are normally commercialized. Should they ignite toxic vapour might be released



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5.3 ADVICE FOR FIREFIGHTERS

Heat and flames can produce fumes. Leakages into drainage systems or water bodies must not occur. Firefighters must wear self-contained breathing apparatus. Avoid direct water flushing as it can facilitate the propagation of flames

6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Not applicable to hot rolled products in the form they are normally commercialized. When performing tasks that entail the dispersion of fine particles, clean-up personnel must wear adequate eye and skin protecting equipment to avoid any contact. If the material is in a dry state avoid inhaling dust

6.2 ENVIRONMENTAL PROTECTION

Not applicable to hot rolled products in the form they are normally commercialized. Collect the materials in appropriate containers labeled for recovery or disposal according to the legislation in force

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

To prevent dust dispersion collect the materials in appropriate containers fit to clean-up purposes. If the material can be recovered proceed according to regulatory provisions otherwise dispose of it according to the legislation in force

6.4 REFERENCE TO OTHER SECTIONS

None

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

DURING HANDLING AND PROCESSING (WELDING, GRINDING, CUTTING) IT IS RECOMMENDED TO:

Operate as necessary in working environments with sufficient natural or artificial ventilation
Limit the spread of dusts and fumes
Follow correct working procedures
Wear appropriate work clothing

The product may be supplied with fluid-protected surface. In that case, during the processing stages previously described special precautions must be observed

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Products must be stored in appropriate areas and should not come in contact with acids and incompatibles materials



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7.3 SPECIFIC END USE(S)

Structural Steels, Pressure vessels, Cold Forming, Cylinders, Pipelines

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

During mechanical and/or thermal processing such as cutting, grinding, welding etc., exposure to dust or fumes has to be kept below the limit values allowed

Listed below are the occupational exposure limit values, known as TLV-TWA, which determine the weighted average concentration over time on a conventional working day of 8 hours and 40 hours working week, to which it is believed that nearly all workers may be repeatedly exposed to, day after day, throughout their working life without adverse effects

These values have been published by the American Conference of Governmental Industrial Hygienists

PNOC dusts*	Inhalable fraction Respirable fraction	TLV-TWA 10 mg/m ³ TLV-TWA 3 mg/m ³
IRON	Iron oxide fumes (as Fe) respirable fraction	TLV-TWA 5 mg/m ³
MANGANESE	Manganese element and inorganic compounds (as Mn) respirable fraction Manganese element and inorganic compounds (as Mn) inhalable fraction	TLV-TWA 0.02 mg/m ³ TLV-TWA 0.1 mg/m ³
ALUMINUM	Aluminum element and inorganic compounds respirable fraction (as Al)	TLV-TWA 1 mg/m ³
CHROME (Italian Leg. Decree 81/08)	Metal Chrome and inorganic compounds (II),and (III) not soluble	TLV-TWA 0.5 mg/m ³
NICKEL	Nichel element inhalable fraction Nichel inorganic compounds not soluble inhalable fraction Nichel inorganici compounds solubile inhalable fraction	TLV-TWA 1.5 mg/m ³ TLV-TWA 0.2 mg/m ³ TLV-TWA 0.1 mg/m ³
BORON	Borate, inorganic compounds	TLV-TWA 2 mg/m ³
COPPER	Fumes Dusts and mist (as Cu)	TLV-TWA 0.2 mg/m ³ TLV-TWA 1 mg/m ³
VANADIUM	Vanadio pentoxide (as V2O5)	TLV-TWA 0.05 mg/m ³
MOLYBDENUM	Molibdenum element and compounds, not soluble inhalable fraction Molibdenum element and compounds, not soluble respirable fraction Molibdenum compounds soluble respirable fraction	TLV-TWA 10 mg/m ³ TLV-TWA 3 mg/m ³ TLV-TWA 0.5 mg/m ³
MINERAL OILS	Oily aerosol	TLV-TWA 5 mg/m ³

CAUTION: Fumes and airborne dust which may contain metals and their oxides can be developed when cutting or welding. Some may pose risks to human health. In such tasks, fumes content and concentration should be assessed and controlled to be compliant with occupational exposure limits values

(*) Particles Not Otherwise Classifiable

8.2 EXPOSURE CONTROL

Respiratory protection	When performing tasks exposing to dust and fumes, use appropriate airways protecting device equipped with "P" dust filter or, if it is necessary, filter for organic compounds
Hand protection	Cut resistant protective gloves
Eye protection	Goggles when welding or cutting



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Skin protection

Protective fire-resistant clothing (racket, trousers)
When manually cutting with oxygen torch, consider using aluminized protective clothing

When processing steel in case of insufficient ventilation of the workplace, local exhaust ventilation should be provided to extract dust, vapours and fumes from the workplace

It is advised to keep dust levels below the recommended exposure levels

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Solid, metal grey
Odour	Odourless
Odour threshold	Not applicable
pH	Not applicable
Melting point	1500-1530 °C
Boiling point	Not available
Evaporation rate	Not applicable
Flammability	Not flammable/not combustible
Upper/lower flammability	Not applicable
Vapour tension	Not applicable
Vapour density	Not applicable
Relative density	7.57
Solubility	Insoluble
Partition coefficient	Not available
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
Viscosity	Not applicable
Esplosive properties	Not applicable
Oxidising properties	Not applicable

9.2 OTHER INFORMATION

None

10. STABILITY AND REACTIVITY

10.1 REACTIVITY

Stable in the normal conditions. Do not use water on the melted product



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10.2 CHEMICAL STABILITY

Stable in normal storage and handling conditions

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

None

10.4 CONDITIONS TO AVOID

Avoid storing close to acids and bases

10.5 INCOMPATIBLE MATERIALS

It reacts when in contact with strong acids to form hydrogen. Oxides dusts may react when come in contact with strong oxidising substances

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Thermal oxidizing decomposition of steel may cause fumes and various metal oxydes (iron, manganese, chrome, nickel, molybdenum etc.)

11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

GENERIC HEALTH HAZARDS AND MAIN ROUTES OF EXPOSURE WHEN STEEL UNDERGOES VARIOUS TRANSFORMATION OPERATIONS SUCH AS CUTTING, WELDING, GRINDING

Skin contact	Dusts arising from processing can cause irritation, dermatitis and sensitization phenomena
Eyes contact	Dusts arising out of processing can cause irritation phenomena
Inhalation	Exposure to dust may lead to breathing difficulties
Ingestion	Because the shape of the products this is not a usual way of exposure



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SPECIFIC EFFECTS ON HUMAN HEALTH IN RELATION TO INDIVIDUAL COMPONENTS OF THE PRODUCT

ACUTE EFFECTS

The excessive inhalation of fumes and metal dust developed out of metal processing may cause irritation to the eyes, nose and throat. This type of exposure may possibly also lead to the onset of metal fume fever

A repeated and prolonged skin contact with rolled products which are surface protected with paraffin based fluids and/or layers of anti-corrosive passivation coating may cause irritation

CHRONIC EFFECTS

Dusts	Pneumoconiosis from accumulation
Iron oxides	Siderosis
Manganese	Manganous parkinsonism, organic psycho-syndrome
Aluminum	Aluminiosis (benign pneumoconiosis)
Chrome	Ulcers and perforations of the nasal septum, ulcerative dermatitis, allergic contact dermatitis, bronchial asthma, nasal cavity cancer
Phosphorous	Polyneuropathy
Nichel	Allergic contact dermatitis, bronchial asthma, lung and nasal cavity cancer
Copper	Congjunctivitis, rhinitis, bronchial asthma, dermatitis
Vanadium	Trachea bronchithis, bronchial asthma, allergic contact dermatitis, pulmonary fibrosis
Mineral oils	Follicular dermatitis

12. ECOLOGICAL INFORMATION

12.1 TOXICITY

Data are not available

12.2 PERSISTENCE AND DEGRADABILITY

Data are not available

12.3 BIOACCUMULATIVE POTENTIAL

Data are not available

12.4 MOBILITY IN SOIL

Soil and subsoil (underground water) particle migration may occur



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12.5 RESULTS OF PBT AND VPVB ASSESSMENT

Data are not available

12.6 OTHER ADVERSE EFFECTS

None

13. DISPOSAL CONSIDERATIONS

As a general rule, steel should be recycled as scrap according to regulation in force. If that is not possible, dispose of according to relevant CER codes such as: code CER 16-01-17 ferrous metals, code CER 15-01-14 metal packaging, etc.

13.1 WASTE TREATMENT METHODS

Not available

14. TRANSPORT INFORMATION

14.1 UN NUMBER

Not applicable

14.2 UN NUMBER PROPER SHIPPING NAME

Not applicable

14.3 TRANSPORT HAZARD CLASSES

Not applicable

14.4 PACKING GROUP

Not applicable

14.5 ENVIRONMENTAL HAZARDS

Not applicable



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14.6 SPECIAL PRECAUTIONS FOR USER

Not applicable

14.7 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND IBC CODE IBC

Not applicable

15. REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATION/LEGISLATION PRODUCT SPECIFIC

THIS PRODUCT AND ITS COSTITUENTS ARE SUBJECT TO THE FOLLOWING REGULATIONS:

Directive 67/548/EC

Directive 1999/45/EC

Regulation EC n. 1907/06 and subsequent amendments thereto

Regulation EU n. 453/2010

Regulation EC n. 1272/2008 and subsequent amendments thereto

Italian Decree-law n. 81/2008

Ministerial Decree 11/12/2009

15.2 CHEMICAL SAFETY ASSESSMENT

Not applicable

16. OTHER INFORMATION

R/H PHRASES TEXT MENTIONED IN SECTION 3:

R11	Highly flammable
R16	Explosive when mixed with oxidising substances
R38	Irritating to skin
R40	Possible carcinogenic effect, limited evidence
R43	May cause sensitization by skin contact
R48/23	Toxic: danger of serious health damage by prolonged exposure through inhalation
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in aquatic environment
H228	Flammable solid
H315	Causes skin irritation



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H317	May cause an allergic skin reaction
H351	Suspected of causing cancer
H372	May cause damage to organs in case of protracted or repeated exposure
H412	Harmful to aquatic life with long lasting effects

Pursuant to the provisions of REACH Regulation the products covered by this SDS are defined as "articles containing substances not intended to be released under normal or foreseeable conditions of use"

This Safety Data Sheet has been prepared using all the information currently available. The information on classification, hazard and risk phrases for the substances considered are updated to the Regulation 605/2014 (EC)

REFERENCE STANDARD:

EU Directive 67/548
EU Directive 1999/45
Regulation (EC) n. 1907/06 EC and subsequent amendments thereto
Regulation (EU) n. 453/2010
Regulation (EC) n. 272/2008 and subsequent amendments thereto