

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture	Carbon Steel Seamless and Welded Pipe
Registration number	-
Synonyms	Process & Power (Medium Alloy Steel, Low Alloy Steel, High Alloy and Stainless Steel, Carbon Steel * OCTG (Carbon Steel, Stainless Steel, Carbon Steel Welded) * MINING (C-Mn Steel Welded) * Line Pipe (C-Mn Steel, Stainless Steel, C-Mn Steel Welded) * INDUSTRIAL APPLICATIONS (C-Mn Steel Welded, Carbon Steel Welded) * Auto (All Bearing Steel Grades) * Seamless steel pipes * Welded steel pipes
Issue date	14-June-2017
Version number	01
Revision date	-
Supersedes date	-

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	OCTG
Uses advised against	None known.

1.3. Details of the supplier of the safety data sheet

Company Name / Address	TenarisDalmine - Piazza Caduti 6 Luglio 1944, 1-24044, Dalmine (BG), Italy TenarisSiderca - 250 Dr. Simini Street - B2804MHA Campana, Buenos Aires, Argentina TenarisTamsa - Km. 433.7 Carr. Mexico, Veracruz Via Xalapa, 91697 Veracruz, Veracruz, Mexico TenarisNKK - 2-1 Ikegami. Kawasaki-ku, 210-0855 Kawasaki, Kawasaki, Japan TenarisAlgoma - 547 Wallace Terrace, ON P6c 1L9 Sault Saint Marie, Ontario, Canada TenarisSilcotub - 93, Mihai Viteazu Blvd., 450131 Zalau, Salaj County, Romania TenarisConfab - Av. Dr. Gastao Vidigal Neto 475 - 12414-900 Pindamonhangaba, Cidade Nova, Sao Paulo, Brazil TenarisTuboCaribe - Carrera 13, No. 93B-51, 4to. Piso, Santa Fe de Bogota, Cudinamarca, Colombia TenariSiat - Guatemala 3400-B1822AXZ Valentin Alsina, Buenos Aires, Argentina TenarisPrudential - 1800, 140-4th Ave. S.W. - T2P 3N3, Calgary, Alberta, Canada TenarisHicman - 5000 N County Rd. 967, 72315 Blytheville, Arkansas, USA TenarisConroe - 699 FM 3083, 77301 Conroe, Texas, USA
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

This product is considered an article according to Regulation (EC) 1272/2008 (CLP Regulation) and and REACH Regulation 1907/2006 EC. The creation of a safety data sheet in accordance with Article 31 of the Regulation (EC) No.1907/2006 is not legally required for articles.


Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards		
Skin sensitisation	Category 1	H317 - May cause an allergic skin reaction.

Hazard summary May cause an allergic skin reaction. Occupational exposure to the substance or mixture may cause adverse health effects.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains:	Nickel
Hazard pictograms	

Signal word	Warning
Hazard statements	
H317	May cause an allergic skin reaction.
Precautionary statements	
Prevention	
P261	Avoid breathing dust.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves.
Response	
P302 + P352	IF ON SKIN: Wash with plenty of water.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
Storage	Store away from incompatible materials.
Disposal	
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
Supplemental label information	None.
2.3. Other hazards	Not a PBT or vPvB substance or mixture.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Nickel	≤ 36	7440-02-0 231-111-4	-	028-002-01-4	
Classification:	Skin Sens. 1;H317, Carc. 2;H351, STOT RE 1;H372				
Chromium	≤ 30	7440-47-3 231-157-5	-	-	#
Classification:	-				
Manganese	≤ 14,5	7439-96-5 231-105-1	-	-	
Classification:	Aquatic Chronic 3;H412				
Molybdenum	≤ 8	7439-98-7 231-107-2	-	-	
Classification:	-				
Silicon	≤ 6,5	7440-21-3 231-130-8	-	-	
Classification:	Eye Irrit. 2;H319				
Tungsten	≤ 2	7440-33-7 231-143-9	-	-	
Classification:	-				
Copper	≤ 2	7440-50-8 231-159-6	-	029-019-01-X	
Classification:	-				
Aluminium	≤ 1,5	7429-90-5 231-072-3	-	013-002-00-1	
Classification:	Flam. Sol. 1;H228, Pyr. Sol. 1;H250, Water-React. 2;H261				
Carbon	≤ 4	7440-44-0 231-153-3	-	-	
Classification:	-				
Niobium	≤ 1	7440-03-1 231-113-5	-	-	
Classification:	-				
Vanadium	≤ 1	7440-62-2 231-171-1	-	-	
Classification:	-				

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Iron	Balance to 100	7439-89-6 231-096-4	-	-	
Classification: -					

List of abbreviations and symbols that may be used above

#: This substance has been assigned Union workplace exposure limit(s).

Composition comments This product contains small amounts of various elements in addition to those listed. These small quantities are frequently referred to as "trace" or "residual" elements that generally originate in the raw materials used. The product may contain the following trace or residual elements including typical percentages for the elements identified: Vanadium $\leq 0.55\%$, Titanium $\leq 0.1\%$, Sulfur $\leq 0.3\%$, Calcium $\leq 0.01\%$, Lead $\leq 0.01\%$ and Boron $\leq 0.07\%$. Percentages are expressed as maximum concentrations of trace elements for the purpose of communicating the potential hazards of the finished product. Consult product specifications for specific composition information. Product surfaces may be treated with small amounts of corrosion-inhibiting oil that may contain mineral oil or petroleum distillates, or paints, epoxies, laminates, etc., generally applied at the customer's request. Refer to the coating manufacturer's SDS for hazards associated with coatings. All concentrations are in percent by weight. The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures

General information Wash contaminated clothing before reuse.

4.1. Description of first aid measures

Inhalation In case of inhalation of high concentrations of dusts: Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

Eye contact Contact with dust: Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth thoroughly if dust is ingested. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed May cause an allergic skin reaction. Dermatitis. Rash.

4.3. Indication of any immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards Solid metal is not flammable; however, finely divided metallic dust or powder may form an explosive mixture with air.

5.1. Extinguishing media

Suitable extinguishing media Special powder against metal fires. Dry sand.

Unsuitable extinguishing media Hot molten material will react violently with water resulting in spattering and fuming.

5.2. Special hazards arising from the substance or mixture During fire, gases hazardous to health may be formed. Fire or high temperatures create: Metal oxides.

5.3. Advice for firefighters

Special protective equipment for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

Special fire fighting procedures Move containers from fire area if you can do it without risk. Cool containers with flooding quantities of water until well after fire is out.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Not applicable to steel products in the solid state. For spills involving finely divided particles, clean-up personnel should protect eyes and skin from accidental contact. If material is in a dry state, avoid inhalation of dust. Wet sweeping methods or vacuuming must be applied to prevent spreading of dry and fine dusts. Avoid using compressed air.

For emergency responders Wear appropriate protective equipment and clothing during clean-up.

6.2. Environmental precautions Do not release collected material into sewers or waterways.

6.3. Methods and material for containment and cleaning up

Massive, solid metal: Pick up and arrange disposal without creating dust.
Dust: Collect dust or particulates using a vacuum cleaner with a HEPA filter. Use approved industrial vacuum cleaner for removal. Collect material in appropriate, labeled containers for recovery or disposal in accordance with local regulations.

6.4. Reference to other sections

For waste disposal, see section 13 of the SDS. For personal protection, see Section 8 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Use lifting and work devices in accordance with manufacturer's instructions when handling these products. Lifting device and attachments (such as spreader bars, chains sling hooks, plate clamps, hoists, cranes, forklifts) must be load-rated sufficient for the job. Provide appropriate exhaust ventilation at places where dust is formed. Avoid breathing dust/fume. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Use proper lifting techniques. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

To avoid steel tubes to roll, slip, slide, or fall over restrain them appropriately while stored. Shelves or racking systems must be suitably designed for the purpose. Large steel pipe should be stored lying flat or secured in cradle racks. Store away from incompatible materials (see section 10 of the SDS).

7.3. Specific end use(s)

OCTG

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Italy. OELs

Components	Type	Value	Form
Aluminium (CAS 7429-90-5)	TWA	1 mg/m ³	Respirable fraction.
Chromium (CAS 7440-47-3)	TWA	0,5 mg/m ³	
Copper (CAS 7440-50-8)	TWA	1 mg/m ³	Dust and mist.
		0,2 mg/m ³	Fume.
Manganese (CAS 7439-96-5)	TWA	0,1 mg/m ³	Inhalable fraction.
		0,02 mg/m ³	Respirable fraction.
Molybdenum (CAS 7439-98-7)	TWA	3 mg/m ³	Respirable fraction.
		10 mg/m ³	Inhalable fraction.
Nickel (CAS 7440-02-0)	TWA	1,5 mg/m ³	Inhalable fraction.
Tungsten (CAS 7440-33-7)	STEL	10 mg/m ³	
	TWA	5 mg/m ³	

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU

Components	Type	Value
Chromium (CAS 7440-47-3)	TWA	2 mg/m ³

Biological limit values

No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures

Follow standard monitoring procedures.

Derived no effect levels (DNELs)

Not available.

Predicted no effect concentrations (PNECs)

Not available.

8.2. Exposure controls

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide easy access to water supply or an emergency shower.

Individual protection measures, such as personal protective equipment

General information

Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection

Normal eye protection practices should be used. If dusty conditions exist, chemical goggles are recommended. Eye protection: to standard BS EN 166.

Skin protection

- Hand protection

Wear suitable gloves tested to EN374.

- Other

Normal work clothing (long sleeved shirts and long pants) is recommended.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
Hygiene measures	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.
Environmental exposure controls	Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state	Solid.
Form	Massive, solid metal.
Colour	Metallic gray.
Odour	Not available.
Odour threshold	Not available.
pH	Not applicable.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not applicable.
Flash point	Not available.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Solid: Non flammable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.

Vapour pressure	Not available.
Vapour density	Not available.
Relative density	7,85 (H2O=1)
Solubility(ies)	Insoluble in water.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.

9.2. Other information No relevant additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Massive metal is stable under normal conditions of use, storage and transport.
10.3. Possibility of hazardous reactions	Contact with acids will release flammable hydrogen gas.
10.4. Conditions to avoid	Contact with incompatible materials.
10.5. Incompatible materials	Strong acids. Strong oxidising agents. Fluorine. Chlorine. Calcium hypochlorite. Iron oxide dust in contact with calcium hypochlorite evolve oxygen which may increase fire and explosion risk.
10.6. Hazardous decomposition products	Thermal oxidative decomposition of steel products can produce fumes containing iron and manganese oxides as well as other elements. If present, surface treatments and coatings such as oil, paint, resin, varnish may generate noxious gases.

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Inhalation	Solid: No adverse effects due to inhalation are expected.
Skin contact	May cause an allergic skin reaction.

Eye contact	Dust may irritate the eyes.
Ingestion	Not likely, due to the form of the product.
Symptoms	May cause an allergic skin reaction. Dermatitis. Rash.
11.1. Information on toxicological effects	
Acute toxicity	Not expected to be acutely toxic.
Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.
Respiratory sensitisation	Based on available data, the classification criteria are not met.
Skin sensitisation	May cause an allergic skin reaction.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	For solid product: The product is not classified as carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Chromium (CAS 7440-47-3)	3 Not classifiable as to carcinogenicity to humans.
Nickel (CAS 7440-02-0)	2B Possibly carcinogenic to humans.

Reproductive toxicity	Based on available data, the classification criteria are not met.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Due to the physical form of the product it is not an aspiration hazard.
Mixture versus substance information	No information available.
Other information	Symptoms may be delayed.

SECTION 12: Ecological information

12.1. Toxicity	The product is not classified as environmentally hazardous. Metals in massive forms presents a limited hazard for the environment.
12.2. Persistence and degradability	Not relevant for inorganic substances.
12.3. Bioaccumulative potential	No data available.
Partition coefficient n-octanol/water (log Kow)	Not available.
Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	Metals in massive form are not mobile in the environment.
12.5. Results of PBT and vPvB assessment	Not a PBT or vPvB substance or mixture.
12.6. Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

13.1. Waste treatment methods	
Residual waste	Recover and recycle, if practical.
Contaminated packaging	Steel pipes may contain metallic and/ or plastic packaging (thread protectors) and/ or wood that should be recycled whenever possible or classified and disposed in accordance with applicable federal, state or local regulations.
EU waste code	Not applicable.
Disposal methods/information	Steel scrap should be recycled whenever possible. Product dusts and fumes from processing operations should also be recycled, or classified and disposed of in accordance with applicable federal, state or local regulations.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. - 14.6.: Not regulated as dangerous goods.

RID

14.1. - 14.6.: Not regulated as dangerous goods.

ADN

14.1. - 14.6.: Not regulated as dangerous goods.

IATA

14.1. - 14.6.: Not regulated as dangerous goods.

IMDG

14.1. - 14.6.: Not regulated as dangerous goods.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Nickel (CAS 7440-02-0)

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Nickel (CAS 7440-02-0)

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Copper (CAS 7440-50-8)

Other regulations

This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended. The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended.

National regulations

Follow national regulation for work with chemical agents.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

PBT: Persistent, bioaccumulative and toxic.
vPvB: Very Persistent and very Bioaccumulative.
DNEL: Derived No-Effect Level.
PNEC: Predicted No-Effect Concentration.
TWA: Time weighted average.
STEL: Short term exposure limit.

References

National Toxicology Program (NTP) Report on Carcinogens
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
IARC Monographs. Overall Evaluation of Carcinogenicity
HSDB® - Hazardous Substances Data Bank
EPA: AQUIRE database

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any H-statements not written out in full under Sections 2 to 15

H228 Flammable solid.
H250 Catches fire spontaneously if exposed to air.
H261 In contact with water releases flammable gases.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H351 Suspected of causing cancer.
H372 Causes damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.

Training information

Follow training instructions when handling this material.

Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available.