



Acciaierie Valbruna

Revision nr. 1.0

Health & Safety Information Sheet Stainless Steel Products

Dated 20/10/2015

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SECTION 1. Identification of the substance/mixture and of the company.

1.1. Product identifier

Product name **Stainless steel**

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

Intended use **Stainless steel for multiple use (automotive, aerospace, oil & gas, mechanics, etc.)**

1.3. Manufacture's details

ITALY

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tel. +39 - 0471 /924111

1.4. Emergency

ambiente@valbruna.it

SECTION 2. Hazard identification.

2.1. Classification of the chemical .

The product is considered "article" under REACH (EU Regulation 1907/2006) and OSHA (Standard Number 1910.1200), therefore **not hazardous in its solid form** and not subject:

- to supply a Safety Data Sheet (article 31 Reg. REACH and OSHA 29 CFR 1910.1200);
- to classification and labelling.

GHS art. 1.3.2.1.1 The GHS (the United Nations Globally Harmonized System of classification and labelling of chemicals) applies to pure substances and their dilute solutions and mixture. "Articles" as defined in the Hazard Communication Standard (29 CFR 1910.1200) of the Occupational Safety and Health Administration of the United States of America, or by similar definition, are outside the scope of the system.

However, certain processes such as cutting, milling, grinding, melting and welding could result in some hazardous materials being emitted. **The following classification information is for the hazardous substances which may be emitted during these processes**



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2.2. Signal word, Hazard Statements & Symbols and precautionary statements: DANGER

Symbol	Hazard	Hazard Statements
	Carcinogenicity - 2 Reproductive Toxicity - 2 Single Target Organ Toxicity (STOT) Repeated Exposure - 1	Suspected of causing cancer. Suspected of damaging fertility or the unborn child. Causes damage to lungs and central nervous system through prolonged or repeated inhalation exposure. May cause an allergic skin reaction. May cause respiratory irritation. Causes eye irritation.
	Skin Sensitization - 1 STOT Single Exposure - 3	
NA	Eye irritation- 2B	

Precautionary statements

Prevention:	First Aid response	Storage/Disposal
Do not breathe dusts / fume / gas / mist / vapor / spray. Wear protective gloves / protective clothing / eye protection / face protection. Contaminated work clothing must not be allowed out of the workplace. Use only outdoors or in well ventilated areas. Wash thoroughly after handling. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke when using this product	If inhaled: Remove person to fresh air and keep comfortable for breathing. If exposed, concerned or feel unwell: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue Rinsing. If on skin: Wash with plenty of water. If irritation or rash occurs: Get medical advice/attention. Take off and wash contaminated clothing before reuse. Call a poison center/doctor if you feel unwell.	Store away from acids and incompatible materials Steel scrap should be recycled whenever possible Otherwise: dispose of contents in accordance with federal, state and local regulations.

Hazards not otherwise classified: None Known

Unknown acute toxicity statement (mixture): None Known

SECTION 3. Composition/Information on ingredients.

3.2. Mixtures.

Contains:

Identification.	Conc. %.	Classification 67/548/CEE.	Classification 1272/2008 (CLP).
IRON CAS. 7439-89-6 EC. 231-096	balance to 100%		

Alloying elements :

Identification.	Conc. %.	Classification 67/548/CEE.	Classification 1272/2008 (CLP).
NICKEL CAS. 7440-02-0 EC. 231-111-4 INDEX. 028-002-00-7	max 70	Carc. Cat. 3 R40, T R48/23, Xi R43,	Carc. 2 H351, STOT RE 1 H372, Skin Sens. 1 H317
CHROMIUM CAS. 7440-47-3 EC. 231-157-5	max 27	Non Hazardous substance with a EU workplace exposure limit	



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MANGANESE CAS. 7439-96-5 EC. 231-105-1	max 15		
MOLYBDENUM CAS. 7439-98-7 EC. 231-107-2	max 11		
SILICON CAS. 7440-21-3 EC. 231-130-8	max 5		
COPPER CAS. 7440-50-8 EC. 231-159-6	max 35		
TUNGSTEN CAS. 7440-33-7 EC. 231-143-9	max 5		
ALUMINIUM CAS. 7429-90-5 EC. 231-072-3	max 6		
CARBON CAS. 7440-44-0 EC. 231-153-3	max 4		
NIObIUM CAS. 7440-03-1 EC. 231-113-5	max 3		
VANADIUM CAS. 7440-62-2 EC. 231-171-1	max 5		
TITANIUM CAS. 7440-32-6 EC. 231-142-3	< 1		
COBALT CAS. 7440-48-4 EC. 231-158-0 INDEX. 027-001-00-9	max 1	Repr. Cat. 3 R62, Xn R22, Xn R42/43, N R51/53	Repr. 2 H361f, Acute Tox. 4 H302, Resp. Sens. 1 H334, Skin Sens. 1 H317, Aquatic Chronic 2 H411

Others elements such as Phosphorus (P), Sulphur (S), Boron (B), Selenium (Se), Nitrogen (N), Tantalium (Ta), Lead (Pb), Tin (Sn), Zirconium (Zr), Cadmium (Cd) can be present as impurities and in any case in a percentage < 1%

SECTION 4. First aid Measures.

4.1. Description of first aid measures.

The information in this section is relevant in the event of dust formation.

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again. If thermal burn has occurred, flush area with cold water and seek medical attention. If mechanical abrasion has occurred, seek medical attention.

INHALATION: Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.

INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless authorised by a doctor.



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4.2. Most important symptoms and effects, both acute and delayed

For symptoms and effects caused by the contained substances, see chap. 11.

4.3. Indication of any immediate medical attention and special treatment needed.

Information not available.

SECTION 5. Fire fighting measures.

5.1. Extinguishing media.

Extinguishing Media: Not Applicable for Stainless Steel as sold/shipped. Use extinguishers appropriate for surrounding materials. UNSUITABLE EXTINGUISHING EQUIPMENT: Molten metal may react violently with water.

5.2. Specific Hazards arising from the chemical.

Not Applicable for Stainless Steel as sold/shipped. When burned, toxic smoke, fume and vapor may be emitted.

5.3. Advice for firefighters.

GENERAL INFORMATION

In the case of fire, use jets of water to cool the containers to prevent the risk of explosions (product decomposition and excess pressure) and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Remove all containers containing the product from the fire, if it is safe to do so. Special protective equipment and precautions for fire-fighters: Self-contained NIOSH approved respiratory protection and full protective clothing should be worn when fumes and/or smoke from fire are present. Heat and flames cause emittance of acrid smoke and fumes. Do not release runoff from fire control methods to sewers or waterways. Firefighters should wear full face-piece self-contained breathing apparatus and chemical protective clothing with thermal protection. Direct water stream will scatter and spread flames and, therefore, should not be used.

SECTION 6. Accidental Release Measures.

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. Do not release collected material into sewers or waterways.

Collect material in appropriate, labeled containers for recovery or disposal in accordance with local regulations.

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 devices and attachments (such as spreader bars, chains, sling hooks, plate clamps, hoists, cranes, forklifts) must be load-rated sufficient for the job.

Processes potentially generating high concentrations of airborne particles should be assessed and controlled as needed. Generation of airborne dust and fume must be minimized. Avoid inhalation of metal dust or fumes.

7.2. Conditions for safe storage, including any incompatibilities.

Store away from acids and incompatible materials.

To avoid steel bars 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 bars should be stored lying flat and chocked, or secured in cradle racks.

7.3. Specific end use(s).

Information not available.

SECTION 8. Exposure controls/Personal protection.

Stainless 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. The following exposure limits are offered as reference for an experienced industrial hygienist to review.



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8.1. Control parameters.

Regulatory References:

OSHA Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELS) from 29 CFR 1910.1000 Z-1 Table [58 FR 35340, June 30, 1993; 58 FR 40191, July 27, 1993, as amended at 61 FR 56831, Nov. 4, 1996; 62 FR 1600, Jan 10, 1997; 62 FR 42018, Aug. 4, 1997; 71 FR 10373, Feb. 28, 2006; 71 FR 16673, Apr. 3, 2006; 71 FR 36008, June 23, 2006.]. PELs are 8-hour time weighted averages (TWAs) unless otherwise indicated.

TLV-ACGIH ACGIH 2014

OEL EU Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC.

Component	OSHA PEL (mg/m ³)	TLV ACGIH (mg/m ³)
IRON	10 mg/m ³ (fumes)	5 mg/m ³ TWA/8h
NICKEL	1 mg/m ³ Nickel, metal and insoluble compounds (as Ni)	1,5 mg/m ³ TWA/8h Nickel element
CHROMIUM	1 mg/m ³ Chromium metal and insol. salts (as Cr)	0,5 mg/m ³ TWA/8h Chromium metal
MANGANESE	5 mg/m ³ Manganese compounds (as Mn) and fumes	0,02 mg/m ³ TWA/8h manganese element
MOLYBDENUM	15 mg/m ³ (total dust) 5 mg/m ³ (insoluble compounds)	10 mg/m ³ TWA/8h (inhalable fraction) Molybdenum insoluble
SILICON	15 mg/m ³ (total dust) 5 mg/m ³ (Respirable fraction)	10 mg/m ³ TWA/8h (inhalable fraction) 3 mg/m ³ TWA/8h (Respirable fraction)
COPPER	0,1 mg/m ³ (fumes) 1 mg/m ³ (dusts and mists)	0,2 mg/m ³ TWA/8h (fumes) 1 mg/m ³ TWA/8h (dusts and mists)
TUNGSTEN	15 mg/m ³ (total dust) PNOR 5 mg/m ³ (respirable fraction) PNOR	1 mg/m ³ TWA/8h (insoluble compounds) 5 mg/m ³ TWA/8h (metals and insoluble compounds)
ALUMINIUM	15 mg/m ³ (total dust) 5 mg/m ³ (respirable fraction)	1 mg/m ³ TWA/8h
CARBON	15 mg/m ³ (total dust) PNOR 5 mg/m ³ (Respirable fraction) PNOR	10 mg/m ³ TWA/8h (inhalable fraction) 3 mg/m ³ TWA/8h (Respirable fraction)
NIوبيUM	15 mg/m ³ (total dust) PNOR 5 mg/m ³ (Respirable fraction) PNOR	10 mg/m ³ TWA/8h (inhalable fraction) 3 mg/m ³ TWA/8h (Respirable fraction)
VANADIUM	0,5 mg/m ³ (respirable dust as V ₂ O ₅) 0,1 mg/m ³ (fumes as V ₂ O ₅)	10 mg/m ³ (inhalable fraction) 3 mg/m ³ TWA/8h (Respirable fraction)
TITANIUM	15 mg/m ³ (total dust) PNOR 5 mg/m ³ (Respirable fraction) PNOR	10 mg/m ³ TWA/8h (inhalable fraction) 3 mg/m ³ TWA/8h (Respirable fraction)
COBALT	0,1 mg/m ³ Metal, Dust & Fume	0,02 mg/m ³ Metal, Dust & Fume

8.2. Exposure controls.

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration. When choosing personal protective equipment, ask your chemical substance supplier for advice. Personal protective equipment must be CE marked, showing that it complies with applicable standards. Provide an emergency shower with face and eye wash station. Exposure levels must be kept as low as possible to avoid significant build-up in the organism. Manage personal protective equipment so as to guarantee maximum protection (e.g. reduction in replacement times).

HAND PROTECTION

In the case of prolonged contact with the product, protect the hands with penetration-resistant work gloves (see standard EN 374).

Work glove material must be chosen according to the use process and the products that may form. Latex gloves may cause sensitivity reactions.

Protective gloves should be worn as required for welding, burning or handling operations

SKIN PROTECTION

Wear category III professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166). In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption. Use safety glasses or goggles as required for welding, burning, sawing, brazing, grinding or machining operations..

RESPIRATORY PROTECTION

NIOSH / MSHA approved dust and fume respirator should be used to avoid excessive inhalation of particles.

Seek professional advice prior to respirator selection and use. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen.

ENVIRONMENTAL EXPOSURE CONTROLS.



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The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

SECTION 9. Physical and Chemical Properties.

Appearance solid
Colour metallic grey.
Odour Not available.
Odour threshold. Not available.
pH. Not available.
Melting point / freezing point. 1440-1650 °C.
Initial boiling point. Not applicable.
Boiling range. Not available.
Flash point. Not applicable.
Evaporation Rate Not available.
Flammability of solids and gases Not available.
Lower flammability limit. Not available.
Upper flammability limit. Not available.
Lower explosive limit. Not available.
Upper explosive limit. Not available.
Vapour pressure. Not available.
Vapour density Not available.
Relative density. 7,85.
Solubility 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 available.
Oxidising properties Not available.

SECTION 10. Stability and Reactivity.

10.1. Reactivity.

There are no particular risks of reaction with other substances in normal conditions of use.
Molten metal may react violently with water.
Metal react with strong acids to form hydrogen. Iron oxide dusts in contact with calcium hypochlorite evolve oxygen and may cause an explosion.

10.2. Chemical stability.

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions.

No hazardous reactions are foreseeable in normal conditions of use and storage.

10.4. Conditions to avoid.

None in particular. However the usual precautions used for chemical products should be respected.

10.5. Incompatible materials.

Strong acids, calcium hypochlorite.

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.



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SECTION 11. Toxicological Information.

11.1. Information on toxicological effects.

Steel products under normal conditions do not represent an inhalation, ingestion or contact health hazard. However, operations such as burning, welding, sawing, brazing, grinding, etc. may result in the following effects if exposure exceeds permissible limits for each component.

Inhalation: The inhalation of high concentrations of freshly formed oxide fumes and dusts of manganese, copper and lead can cause an acute reaction known as "metal fume fever".

Eye contact: Excessive exposure to high concentration of dust may cause irritation to the eyes.

Skin contact: Skin contact with dusts and with oil residues (only if prolonged and repeated) may cause irritation or sensitization.

Ingestion: Ingestion of dust may cause nausea or vomiting.

Health effects:

Long-term inhalation exposure to high concentrations to pneumoconiotic agents may act synergistically with inhalation of oxides, fumes or dusts of this product to cause toxic effects.

Individuals with chronic respiratory disorders (i.e., asthma, chronic bronchitis, emphysema, etc.) may be adversely affected by any fume or airborne particulate matter exposure.

Data available for the dangerous elements:

NICKEL

RESPIRATORY OR SKIN SENSITISATION: may cause an allergic skin reaction, harmonized classification as per Reg. CLP, Annex VI;

CARCINOGENICITY: NOAEC (carcinogenicity) 0.4 mg/m³, rat, OECD Guideline 451.

STOT-REPEATED EXPOSURE. Repeated dose toxicity study via inhalation route: LOAEC 1 mg/m³, rat, OECD Guideline 413.

SULFUR SKIN CORROSION/IRRITATION: irritating, rabbit, equivalent or similar to OECD Guideline 404.

SEZIONE 12. Ecological Information

12.1. Toxicity

Information not available.

12.2. Persistence and degradability.

Information not available

12.3. Bioaccumulative potential.

Information not available.

12.4. Mobility in soil.

Information not available.

12.5. Results of PBT and vPvB assessment.

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects

Information not available.

SECTION 13. Disposal considerations.

13.1. Waste treatment methods.

Product residues in the form of powder should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations. Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

SECTION 14. Transport Information.

US Department of Transportation (DOT) under 49 CFR 172.101 does not regulate **Stainless Steel** as a hazardous material. All federal, state, and local laws and regulations that apply to the transport of this type of material must be adhered to.

Transport Dangerous Goods (TDG) Classification: **Stainless Steel** does not have a TDG classification.



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SECTION 15. Regulatory Information.

Regulatory Information: The following listing of regulations relating to a product may not be complete and should not be solely relied upon for all regulatory compliance responsibilities.

This product and/or its constituents are subject to the following regulations:

OSHA Regulations: Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-2, Z-3): The product, **Stainless 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, **Stainless Steel** is not listed as a whole. However, individual components of the product are listed:

Components Regulations

Chromium CERCLA, CWA, SARA 313, RCRA, SDWA

Manganese CAA, SARA 313, SDWA

Nickel CAA, CERCLA, CWA, SARA 313

SARA 311/312 Potential Hazard Categories: Immediate Acute Health Hazard; Delayed Chronic Health Hazard

Section 313 Supplier Notification: The product, **Stainless Steel** contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-to-Know Act and 40 CFR part 372:

CAS #	Chemical Name	Percent by Weight
7440-47-3	Chromium	26 max
7439-96-5	Manganese	10 max
7440-02-0	Nickel	22 max

Regulations Key:

CAA Clean Air Act (42 USC Sec. 7412; 40 CFR Part 61 [As of: 8/18/06])

CERCLA Comprehensive Environmental Response, Compensation and Liability Act (42 USC Secs. 9601(14), 9603(a); 40 CFR Sec. 302.4, Table 302.4, Table 302.4 and App. A)

CWA Clean Water Act (33 USC Secs. 1311; 1314(b), (c), (e), (g); 136(b), (c); 137(b), (c) [as of 8/2/06])

RCRA Resource Conservation Recovery Act (42 USC Sec. 6921; 40 CFR Part 261 App VIII)

SARA Superfund Amendments and Reauthorization Act of 1986 Title III Section 302 Extremely Hazardous Substances (42 USC Secs. 11023, 13106; 40 CFR sec. 372.65) and

Section 313 Toxic Chemicals (42 USC Secs. 11023, 13106; 40 CFR Sec. 372.65 [as of 6/30/05])

TSCA Toxic Substance Control Act (15 U.S.C. s/s 2601 et seq. [1976])

SDWA Safe Drinking Water Act (42 U.S.C. s/s 300f et seq. [1974])

State Regulations: The product, **Stainless Steel** as a whole is not listed in any state regulations. 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: Chromium, Manganese, Molybdenum, Nickel and Silicon

Environmental Hazards: Chromium, Manganese and Nickel

Special Hazardous Substance: Chromium and Nickel

California Prop. 65: Contains elements known to the State of California to cause cancer or reproductive toxicity. This includes Chromium compounds and Nickel.

New Jersey: Contains regulated material in the following categories:

Hazardous Substance: Chromium, Manganese, Molybdenum, Silicon and Nickel

Environmental Hazards: Chromium, Manganese and Nickel

Special Hazardous Substance: Chromium, Manganese and Silicon

Minnesota: Chromium, Manganese, Molybdenum and Nickel

Massachusetts: Chromium, Manganese, Molybdenum, Silicon and Nickel

Other Regulations:

WHMIS Classification (Canadian): The product, **Stainless Steel** is not listed as a whole. However individual components are listed.

Ingredients / WHMIS Classification

Silicon B4

Manganese D2A

Nickel D2A, D2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.



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SECTION 16. Other Information.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. GHS - Occupational Safety and Health Administration
 2. OSHA (Standard Number 1910.1200).
 3. Directive 1999/45/EC and following amendments
 4. Directive 67/548/EEC and following amendments and adjustments
 5. Regulation (EU) 1907/2006 (REACH) of the European Parliament
 6. Regulation (EU) 1272/2008 (CLP) of the European Parliament
 7. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
 8. Regulation (EU) 453/2010 of the European Parliament
 9. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
 10. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
 11. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
 12. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
 13. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
- The Merck Index. - 10th Edition
 - Handling Chemical Safety
 - Niosh - Registry of Toxic Effects of Chemical Substances
 - INRS - Fiche Toxicologique (toxicological sheet)
 - Patty - Industrial Hygiene and Toxicology
 - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
 - ECHA website

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