

SAFETY DATA SHEET

legal basis:
COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to
Regulation (EC) No 1907/2006 of the European Parliament and of the Council (REACH)

Ferrotitanium FeTi

Creation date 12th October 2023
Revision date Version 1

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

- 1.1. Product identifier** Ferrotitanium FeTi
Substance / mixture mixture
- 1.2. Relevant identified uses of the substance or mixture and uses advised against**
Mixture's intended use
Alloying additive for quality steels. For professional and industrial use only.
Mixture uses advised against
The product should not be used in ways other than those referred in Section 1.
- 1.3. Details of the supplier of the safety data sheet**
Manufacturer
Name or trade name MPS Technology Sp. z o.o.
Address ul. Legionów 94, Częstochowa, 42-200
Poland
Phone +48 34 343 80 36
E-mail handel@mps-tech.pl
- Competent person responsible for the safety data sheet**
Name MPS Technology Sp. z o.o.
E-mail handel@mps-tech.pl
- 1.4. Emergency telephone number**
European emergency number: 112

SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture**
Classification of the mixture in accordance with Regulation (EC) No 1272/2008
The mixture is not classified as dangerous according to Regulation (EC) No 1272/2008.
Full text of all classifications and hazard statements is given in the section 16.
- 2.2. Label elements**
Supplemental information
EUH210 Safety data sheet available on request.
- 2.3. Other hazards**
The endocrine-disrupting properties of the mixture have not been studied. Mixture does not contain any substance meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended. Metal alloys in their usual solid form (bulk) and under normal conditions do not pose a health hazard through inhalation, ingestion, or contact. They also do not present a fire or explosion hazard. However, operations such as welding, cutting, soldering, grinding, sanding, heat treatment, etching, machining, or similar activities can generate dust, fumes, sparks, or chips that may pose a health risk or lead to a fire or explosion.

SECTION 3: Composition/information on ingredients

- 3.2. Mixtures**
Chemical characterization
Mixture of substances and additives specified below.
Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment

| Identification numbers | Substance name | Content in % weight | Classification according to Regulation (EC) No 1272/2008 | Note |
|--|----------------|---------------------|--|------|
| CAS: 7440-32-6 EC: 231-142-3 | titanium | 68-75 | not classified as dangerous | |
| CAS: 7439-89-6 EC: 231-096-4 | iron | 15-20 | not classified as dangerous | |
| Index: 013-002-00-1 CAS: 7429-90-5 EC: 231-072-3 | aluminium | 1-5 | Flam. Sol. 1, H228 Water-react. 2, H261 | 1 |

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| Identification numbers | Substance name | Content in % weight | Classification according to Regulation (EC) No 1272/2008 | Note |
|--|----------------|---------------------|---|------|
| CAS: 7440-62-2 EC: 231-171-1 | vanadium | 1-3 | not classified as dangerous | |
| Index: 008-001-00-8 CAS: 7782-44-7 EC: 231-956-9 Registration number: zwoln. (art. 2 ust. 7 lit B) | oxygen | 1-3 | Ox. Gas 1, H270 Press. Gas (compressed gas), H280 | 2 |
| CAS: 7440-31-5 EC: 231-141-8 | tin | 0,1-1 | not classified as dangerous | |
| CAS: 7727-37-9 EC: 231-783-9 Registration number: zwoln. (art. 2 ust. 7 lit A) | nitrogen | 0,1-1 | Press. Gas (compressed gas), H280 | |
| CAS: 7440-44-0 EC: 931-328-0 | carbon | 0,1-0,5 | not classified as dangerous | |
| CAS: 7440-21-3 EC: 231-130-8 | silicon | 0,1-0,5 | not classified as dangerous | |
| Index: 015-002-00-7 CAS: 7723-14-0 EC: 231-768-7 | phosphorous | 0,01-0,1 | Flam. Sol. 1, H228 Aquatic Chronic 3, H412 | |
| Index: 016-094-00-1 CAS: 7704-34-9 EC: 231-722-6 | sulfur | 0,01-0,1 | Acute Tox. 4, H302+H332 Skin Irrit. 2, H315 Aquatic Chronic 3, H412 | 1 |

Notes

- Note T: This substance may be marketed in a form which does not have the physical hazards as indicated by the classification in the entry in Part 3. If the results of the relevant method or methods in accordance with Part 2 of Annex I of this Regulation show that the specific form of substance marketed does not exhibit this physical property or these physical hazards, the substance shall be classified in accordance with the result or results of this test or these tests. Relevant information, including reference to the relevant test method (s) shall be included in the safety data sheet.
- Note U (Table 3): When put on the market gases have to be classified as "Gases under pressure", in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case. The following codes are assigned:

Press. Gas (Comp.)
Press. Gas (Liq.)
Press. Gas (Ref. Liq.)
Press. Gas (Diss.)

Aerosols shall not be classified as gases under pressure (See Annex I, Part 2, Section 2.3.2.1, Note 2).

Full text of all classifications and hazard statements is given in the section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet.

If inhaled

Not applicable due to the form. Possible exposure to dust or fine particles. Remove person to fresh air and keep comfortable for breathing.

If on skin

Not applicable due to the form.

If in eyes

Not applicable due to the form. Possible eye contamination during exposure to fine particles or dust. Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person.

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If swallowed

Rinse out the mouth with clean water. In the event of issues, find medical help.

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

If inhaled

Mucous membranes may be irritated.

If on skin

Not expected.

If in eyes

When intruding eyes, it can evoke irritation.

If swallowed

Not expected.

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

Symptomatic treatment.

More information

Other relevant information is not available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Product is non-flammable under normal conditions of storage and use.

Fire extinguishing powders based on metal chlorides (e.g., NaCl, KCl, MgCl₂, CaF₂).

Unsuitable extinguishing media

Water. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. There may be a significant fire hazard when generating fine chips or dust and during scrap removal. Dry dust from metal alloys can ignite from a match or a small spark. Toxic fumes of metal oxides, such as aluminium, iron, chromium, as well as non-metals (phosphorus, carbon, sulphur oxides), may be emitted. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

5.3. Advice for firefighters

Self-Contained Breathing Apparatus (SCBA) with chemical resistant gloves. Use a self-contained breathing apparatus and full-body protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Follow the instructions in the Sections 7 and 8.

6.2. Environmental precautions

Prevent contamination of the soil and entering surface or ground water.

6.3. Methods and material for containment and cleaning up

Place the product mechanically in an appropriate manner. In the case of dust generation, use a vacuum cleaner designed for collecting explosive dust and equipped with high-efficiency filters (HEPA). Do not sweep or use compressed air for cleaning. Dispose of the collected material according to the instructions in the section 13.

6.4. Reference to other sections

See the Section 7, 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protect from moisture. Prevent formation of dust in concentrations exceeding the occupational exposure limits. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose.

7.3. Specific end use(s)

Apart from the already mentioned guidelines, it is not necessary to follow any specific recommendations for the use of this product.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

The mixture contains substances for which occupational exposure limits are set.

DNEL

| aluminium | | | | | |
|---------------------|-------------------|------------------------|--------------------------|---------------------|--------|
| Workers / consumers | Route of exposure | Value | Effect | Value determination | Source |
| Workers | Inhalation | 3.72 mg/m ³ | Chronic effects local | | |
| Consumers | Oral | 3.95 mg/kg | Chronic effects systemic | | |

| tin | | | | | |
|---------------------|-------------------|-------------------------|--------------------------|---------------------|--------|
| Workers / consumers | Route of exposure | Value | Effect | Value determination | Source |
| Workers | Dermal | 133.3 mg/kg | Acute effects systemic | | |
| Workers | Inhalation | 11.75 mg/m ³ | Acute effects systemic | | |
| Consumers | Inhalation | 3.476 mg/m ³ | Chronic effects systemic | | |
| Consumers | Dermal | 80 mg/kg | Chronic effects systemic | | |
| Consumers | Oral | 80 mg/kg | Chronic effects systemic | | |
| Workers | Dermal | 133.3 mg/kg | Chronic effects systemic | | |
| Workers | Inhalation | 11.75 mg/m ³ | Chronic effects systemic | | |
| Consumers | Inhalation | 3.476 mg/m ³ | Acute effects systemic | | |
| Consumers | Dermal | 80 mg/kg | Acute effects systemic | | |
| Consumers | Oral | 80 mg/kg | Acute effects systemic | | |

PNEC

| aluminium | | | |
|------------------------------------|---------|---------------------|--------|
| Route of exposure | Value | Value determination | Source |
| Microorganisms in sewage treatment | 20 mg/l | | |

8.2. Exposure controls

Ensure workplace is equipped with a safety shower and eye wash station. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

Eye/face protection

Under normal conditions of use, it is not required. Wear safety glasses if there is a risk of eye contamination.

Skin protection

When handling in long-term or repeatedly, use protective gloves. Other protection: protective work- and footwear, according to EN 344.

Respiratory protection

In case of dust or when the maximum allowable concentration is exceeded, it will be necessary to use respiratory protection (e.g. a mask with a HEPA filter).

Thermal hazard

Unknown.

Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|------------------------------|-------------------|
| Physical state | solid |
| Colour | silver, grey |
| Odour | without fragrance |
| Melting point/freezing point | not determined |

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| | |
|--|--|
| nitrogen (CAS: 7727-37-9) | -210 °C |
| Boiling point or initial boiling point and boiling range | not determined |
| nitrogen (CAS: 7727-37-9) | -196 °C |
| Flammability | non-inflammable |
| Lower and upper explosion limit | not applicable |
| Flash point | not applicable |
| Auto-ignition temperature | not applicable |
| Decomposition temperature | not applicable |
| pH | non-soluble (in water) |
| Kinematic viscosity | not applicable |
| Solubility in water | insoluble |
| nitrogen (CAS: 7727-37-9) | 0.02 g/l |
| Partition coefficient n-octanol/water (log value) | does not apply to mixtures |
| Vapour pressure | not applicable |
| Density and/or relative density | not determined |
| nitrogen (CAS: 7727-37-9) | 0.0012 g/cm ³ at 21 °C (jako opary) |
| Relative vapour density | not applicable |
| Particle characteristics | not determined |
| Form | solid: compact, bulk |

9.2. Other information

none

SECTION 10: Stability and reactivity

10.1. Reactivity

When used in the standard way, there is not any dangerous reaction with other substances.

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

A violent reaction (explosion) can occur when water comes into contact with molten metal. Avoid contact with concentrated nitric acid. Reacts violently with copper or lead oxide when heated. Reacts with fluorine, dry chlorine, potassium chloride, potassium nitrate, and potassium permanganate.

10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect from moisture.

10.5. Incompatible materials

Protect against strong acids, bases and oxidising agents. Water. Moisture.

10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide, carbon dioxide, metal and non-metal oxides are formed at high temperature and in fire.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

No toxicological data is available for the mixture. No toxicological effects are expected if occupational exposure limits are not exceeded. Inhalation of dust above the occupational exposure limits can lead to acute inhalation poisoning, depending on the concentration and exposure time.

Acute toxicity

Based on available data the classification criteria are not met.

| Ferrotitanium FeTi | | | | | | | |
|------------------------|-----------|--------|---------------|---------------|---------|-----|----------------------|
| Route of exposure | Parameter | Method | Value | Exposure time | Species | Sex | Value determination |
| Oral | ATE | | 2500000 mg/kg | | | | Calculation of value |
| Inhalation (dust/mist) | ATE | | 7500 mg/l | | | | Calculation of value |

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| carbon | | | | | | | |
|-------------------|-------------------|----------|-------------|---------------|---------|-----|---------------------|
| Route of exposure | Parameter | Method | Value | Exposure time | Species | Sex | Value determination |
| Oral | LD ₅₀ | OECD 423 | >2000 mg/kg | | Rat | F | |
| Inhalation | LC ₀ | OECD 403 | 64.4 mg/l | 1 hour | Rat | F | |
| Inhalation | LC ₁₀₀ | OECD 403 | 235 mg/l | 1 hour | Rat | F | |
| Inhalation | LC ₅₀ | OECD 403 | >8.5 mg/l | 1 hour | Rat | F | |

Skin corrosion/irritation

Based on available data the classification criteria are not met.

Serious eye damage/irritation

Based on available data the classification criteria are not met.

Respiratory or skin sensitisation

Based on available data the classification criteria are not met.

Germ cell mutagenicity

Based on available data the classification criteria are not met.

Carcinogenicity

Based on available data the classification criteria are not met.

Reproductive toxicity

Based on available data the classification criteria are not met.

Toxicity for specific target organ - single exposure

Based on available data the classification criteria are not met.

Toxicity for specific target organ - repeated exposure

Based on available data the classification criteria are not met.

Aspiration hazard

Based on available data the classification criteria are not met.

11.2. Information on other hazards

The endocrine-disrupting properties of the mixture have not been studied.

SECTION 12: Ecological information

12.1. Toxicity

It is not expected to be harmful to the aquatic environment.

12.2. Persistence and degradability

There are no ecotoxicological data available for the product.

12.3. Bioaccumulative potential

There are no ecotoxicological data available for the product.

12.4. Mobility in soil

There are no ecotoxicological data available for the product.

12.5. Results of PBT and vPvB assessment

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

12.6. Endocrine disrupting properties

The endocrine-disrupting properties of the mixture in aqueous environment have not been studied.

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12.7. Other adverse effects

Unknown.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. The product must not be disposed of with municipal waste.

Waste management legislation

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

SECTION 14: Transport information

14.1. UN number or ID number

not subject to transport regulations

14.2. UN proper shipping name

not relevant

14.3. Transport hazard class(es)

not relevant

14.4. Packing group

not relevant

14.5. Environmental hazards

Product is not an environmental hazard according to the criteria of the UN Model Regulations.

14.6. Special precautions for user

Reference in the Sections 4 to 8.

14.7. Maritime transport in bulk according to IMO instruments

not relevant

SECTION 15: Regulatory information

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

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

15.2. Chemical safety assessment

For mixtures, a chemical safety assessment is not required.

SECTION 16: Other information

A list of standard risk phrases used in the safety data sheet

| | |
|-----------|---|
| H228 | Flammable solid. |
| H261 | In contact with water releases flammable gases. |
| H270 | May cause or intensify fire; oxidiser. |
| H280 | Contains gas under pressure; may explode if heated. |
| H315 | Causes skin irritation. |
| H412 | Harmful to aquatic life with long lasting effects. |
| H302+H332 | Harmful if swallowed or if inhaled. |

A list of additional standard phrases used in the safety data sheet

| | |
|--------|---|
| EUH210 | Safety data sheet available on request. |
|--------|---|

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Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

Key to abbreviations and acronyms used in the safety data sheet

| | |
|------------------------|---|
| ADR | European agreement concerning the international carriage of dangerous goods by road |
| BCF | Bioconcentration Factor |
| CAS | Chemical Abstracts Service |
| CLP | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures |
| EC | Identification code for each substance listed in EINECS |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| EmS | Emergency plan |
| EU | European Union |
| EuPCS | European Product Categorisation System |
| IATA | International Air Transport Association |
| IBC | International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals |
| ICAO | International Civil Aviation Organization |
| IMDG | International Maritime Dangerous Goods |
| IMO | International Maritime Organization |
| INCI | International Nomenclature of Cosmetic Ingredients |
| ISO | International Organization for Standardization |
| IUPAC | International Union of Pure and Applied Chemistry |
| LC ₀ | Lethal concentration of a substance in which it can be expected death of 0% of the population |
| LC ₁₀₀ | Lethal concentration of a substance in which it can be expected death of 100% of the population |
| LC ₅₀ | Lethal concentration of a substance in which it can be expected death of 50% of the population |
| LD ₅₀ | Lethal dose of a substance in which it can be expected death of 50% of the population |
| log K _{ow} | Octanol-water partition coefficient |
| OEL | Occupational Exposure Limits |
| PBT | Persistent, Bioaccumulative and Toxic |
| ppm | Parts per million |
| Press. Gas (Comp.) | Gas under pressure: compressed gas |
| Press. Gas (Diss.) | Gas under pressure: dissolved gas |
| Press. Gas (Liq.) | Gas under pressure: liquefied gas |
| Press. Gas (Ref. Liq.) | Gas under pressure: refrigerated liquefied gas |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| RID | Agreement on the transport of dangerous goods by rail |
| UN | Four-figure identification number of the substance or article taken from the UN Model Regulations |
| UVCB | Substances of unknown or variable composition, complex reaction products or biological materials |
| VOC | Volatile organic compounds |
| vPvB | Very Persistent and very Bioaccumulative |

| | |
|-----------------|--|
| Acute Tox. | Acute toxicity |
| Aquatic Chronic | Hazardous to the aquatic environment (chronic) |
| Flam. Sol. | Flammable solid |
| Ox. Gas | Oxidising gase |
| Press. Gas | Gases under pressure |
| Skin Irrit. | Skin irritation |
| Water-react. | Substance or mixture which in contact with water emits flammable gas |

Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use

Uses advised against: Any type of use not listed in this Safety Data Sheet.

Information about data sources used to compile the Safety Data Sheet

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The changes (which information has been added, deleted or modified)

Version 1.

More information

Classification procedure - calculation method.

Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.
