

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

1.1 Product Identifier	Securo FB steel mesh, Perforated Steel plates and Stretch Metal plates
1.2 Relevant Identified uses of substance or mixture and uses advised against	Structural fire protection, when combined with intumescent building materials
1.3 Details of the supplier of the safety data sheet	Securo AS, Industrivegen 10, 7650 Verdal Norway  Tel: +47 99 41 90 00 Email: post@securo.no; Web: www.securonorway.no
1.4 Emergency telephone number	Main office between 08:00 to 15:00 CET + 47 99 41 90 00

## 2. Hazards identification

2.1 Classification of the substance of mixture	CLP Classification in accordance with Regulation (EC) No. 1272/2008  <u>Physical Hazards</u> Based on the available data, the classification criteria are not met  <u>Health Hazards</u> Skin Sensitization Category 1 (H317) Carcinogenicity Category 2 (H351) Specific target organ toxicity Category 1 (H372)  <u>Environmental Hazards</u> Based on available data, the classification criteria are not met
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### 2.2 Label elements



**CHRONIC HEALTH HAZARD**

Signal word

Warning

Hazard Statements

H317 - May cause an allergic skin reaction

H351 - Suspected of causing cancer

H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary Statements

P302 + P352 – IF ON SKIN: Wash with plenty of soap and water

P210 – Obtain special instructions before use

P280 – Wear protective gloves/protective clothing/eye protection/face protection

P308 + P313 – IF exposed or concerned: Get medical advice/attention

According to Regulation (EC) No. 1906/2006 (REACH) none of the substances, contained in this product are a PBT/ vPvB substance.

2.3 Other Hazards

### 3. Composition / Information on ingredients

Component	CAS-No.	EC-No.	Weight %	CLP Classification - Regulation (EC) NO 1272/2008
Iron	7439-89-6	EEC No. 231-096-4	73	-
Chromium	7440-47-3	ECC No. 231-157-5	17	-
Nickel	7440-02-0	ECC No. 231-11-4	8.2	Skin Sens. 1 (H317) Carc. 2 (H351) STOT RE 2 (H373)
Manganese	7439-96-5	ECC No. 231-105-1	1.5	-
Trace amounts of Phosphorus, Titanium, Sulphur, Aluminium, Oxygen, Carbon, Cobalt, Copper				

## 4. First aid measures

### 4.1 Description of first aid measures

#### General advice

If symptoms persist, call a physician

#### After inhalation

When used as intended, exposure through inhalation is not to be expected. In case of inhaling dust (possibly caused by abrasion) the affected person should be moved into fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

#### After contact with skin

Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

#### After contact with eyes

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

#### After ingestion

Clean mouth with water and drink plenty of water afterwards. Get medical attention if symptoms occur

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

May cause allergic skin reaction. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, light-headedness, chest pain, muscle pain or flushing.

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

Treat symptomatically

## 5. Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Approved class D extinguishers. Do not use water or foam.

#### Unsuitable extinguishing media

Water may be ineffective.

### 5.2 Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapours.

#### Hazardous combustion products

Nickel oxides, Iron oxides, Chromium oxide.

### 5.3 Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressurized. Demand MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Suitable gloves and eye protection/wear protective clothing. Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. No special precautions required.

### 6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system. Should not be released into the environment. Do not allow material to contaminate ground water system.

### 6.3 Methods and materials for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal. Pick up and transfer to properly labelled containers.

### 6.4 Reference to other sections

Refer to protective measures in chapters 8 and 13.

## 7. Handling and storage

### 7.1 Precautions for safe handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep in a dry place. Keep away from acids.

### 7.3 Specific end use(s)

As given in Section 1.

## 8. Exposure controls/personal protection

### 8.1 Control Parameters

#### Exposure limits

EU - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC

#### COMPONENT

Chromium

Nickel

Manganese

#### EUROPEAN UNION LIMIT

TLV: 0.5mg/m<sup>3</sup> as TWA (inhalable fraction)

TLV: 1.5mg/m<sup>3</sup> as TWA (inhalable fraction)

TLV: 0.1mg/m<sup>3</sup> as TWA (inhalable fraction)

## 8.2 Exposure controls

### Engineering measures

None under normal use conditions

### Eye/face protection

Wear safety glasses with side shields or goggles (EN 166).

### Hand protection

No special protective equipment required. Use suitable protective gloves, depending on operation.

### Skin protection

Wear closed/long working clothes.

### Respiratory protection

Local or general exhaust ventilation during welding, brazing, grinding, machining, and other processes which may generate airborne contaminants. Not required for general handling of materials.

### Environmental exposure controls

Prevent product from entering drains. Do not allow materials to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state:

Solid matter

Colour:

According to product specification

Odour:

Odorless

pH value:

Not applicable

### Changes in physical state

Melting point:

Approx. 1 300 – 1 500 °C

Initial boiling point and range:

Not determined

Sublimation point:

Not applicable

Flash point:

Not applicable

Sustaining combustion:

Not sustaining combustion

### Flammability

Solid:

Not applicable

### Explosion properties

Lower explosion limits (LEL):

The product is not explosive.

Upper explosion limits (UEL):

Not determined

Ignition temperature

Not applicable

### Auto-ignition temperature

Solid:

Not applicable

Decomposition temperature:

Not determined

Oxidizing properties

The product is not self-igniting

Vapour pressure:

23 hPa @ 20°C

Density (@20°C):

7.7 – 8.3g/cm<sup>3</sup>

Water solubility (@20°C):

Insoluble

Solubility in other solvents

Not determined

Partition coefficient:

Not applicable

Viscosity / dynamic (@20°C):

Not determined

Viscosity / kinematic (@20°C):

Not determined

9.2 Other information

No data available

## 10. Stability and reactivity

10.1 Reactivity

Not determined for stainless steel in solid state.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions known under normal processing.

10.4 Conditions to avoid

Incompatible products. Excess heat. Non-ventilated areas when machining. Contact with strong mineral acids.

10.5 Incompatible materials

Strong oxidizing agents, strong acids.

10.6 Hazardous decomposition products

Stainless steels are stable and non-reactive under normal ambient atmospheric conditions, because in solid form all alloying elements are firmly bonded in the metallic matrix. Solid stainless steel does not contain Cr (VI) compounds. When heated to very high temperatures (melting or during welding operations), fumes may be produced.

In contact with strong acids, stainless steels may release gaseous acid decomposition products (e.g. hydrogen and oxides of nitrogen) and chromium may be released in the form of chromium III. In contact with strong oxidizers at high pH (e.g. alkaline cleaners at pH 10-14), very small amounts of Cr (VI) compounds may form at ambient temperatures.

None of these substances are intended to be released under normal or reasonably foreseeable conditions of use. Exposure to humans or the environment during normal or reasonably foreseeable conditions of use including disposal is negligible.

During machining, metal fumes may be generated

## 11. Information on toxicological effects

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

#### Acute toxicity

Oral, Dermal, Inhalation

Based on available data, the classification are not met.

#### Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Iron	>30 000 mg/kg (Rat)	-	-
Nickel	LD50 > 9000 mg/kg (Rat)	-	LC> 10.2mg/L (Rat) 1h
Chromium	LD50 > 9000 mg/kg (Rat)	-	-
Manganese	9000 mg/kg (Rat)	-	-

#### Irritation and corrosivity

Based on available data, the classification criteria are not met.

#### Sensitising effects

Respiratory

No data available

Skin

Category 1 - May cause sensitization by skin contact

#### STOT-single exposure

Based on available data, the classification criteria are not met.

#### STOT-repeated exposure

SOT-RE 2 (H373)

#### Aspiration hazard

Not applicable. Solid.

#### Germ cell mutagenicity

No data available.

#### Serious eye damage/irritation

No data available.

#### Carcinogenicity

Nickel - Category 1A

No carcinogenic effects resulting from exposure to stain-less steel have been reported, either in epidemiological studies or in tests with animals.

#### Further information

In its solid form stainless steel does not present an inhalation, absorption or ingestion hazard.

Short-term over-exposure to the fumes generated by hot rolling, hot forging, welding, brazing, or thermal cutting on stainless steel may result in dizziness; nausea; and irritation of the eyes, skin, lungs, nose and throat. Metal fume fever, a flu-like illness lasting about 24-hours with chills, ache, cough, and fever can be caused by overexposure to metal fumes, including iron, chromium, manganese and copper.

Metal dust particles may cause eye, skin and/or respiratory system irritation. Acute asthma attacks may be experienced by asthmatics when metal dust or fume is inhaled.

Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, light-headedness, chest pain, muscle pain or flushing.

## 12. Ecological information

### 12.1 Toxicity

The product contains following substances which are hazardous for the environment. Contains a substance which is: Very toxic to aquatic organisms. May cause long-term adverse effects in the environment. Do not allow material to contaminate groundwater system.

Component	Freshwater Fish	Water Flea	Freshwater Algae
Nickel	LC50: < 100mg/L, 96h (Brachydanio rerio) LC50: = 1.3mg/L, 96h Semi-static (Cyprinus carpio) LC50: = 10.4 mg/L, 96g static (Cyprinus carpio)	EC50 = 510µg/L 96h	ECO50 = 0.1mg/L 72h ECO50 = 0.18 mg/L 72h

### 12.2 Persistence and degradability

Product contains heavy metals. Discharge into the environment must be avoided. Special pre-treatment is necessary.

#### Persistence

Insoluble in water, may persist.

#### Degradability

Not relevant for inorganic substances.

#### Degradation in sewage treatment plant

Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

### 12.3 Bio-accumulative potential

May have some potential to bioaccumulate; Product has a high potential to bioconcentrate:

#### Chromium

Bioconcentration factor (BCF): 1.03 - 1.22

### 12.4 Mobility in soil

Spillage unlikely to penetrate soil is not likely mobile in the environment due its low water solubility.

### 12.5 Results of PBT and vPvB assessmen

No data available for assessment.

### 12.6 Endocrine disrupting properties

The product does not contain any known or suspected endocrine disruptors.

### 12.7 Other adverse effects

Not known.

## 13. Disposal considerations

### 13.1 Waste treatment methods

#### Waste from residues/unused products

Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

Dispose of this container to hazardous or special waste collection point.

#### Contaminated packaging

According to the EWC, Waste Codes are not product specific but application specific.

#### European Waste Catalogue (EWC)

Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

#### Other information



## 14. Transport information

### 14.1 Land transport (ADR/RID)

14.1.1 UN Number

No dangerous good in sense of this transport regulation.

14.1.2 UN Proper shipping name :

No dangerous good in sense of this transport regulation.

14.1.3 Transport hazard class(es):

No dangerous good in sense of this transport regulation.

14.1.4 Packing group:

No dangerous good in sense of this transport regulation.

### 14.2 Inland waterways transport (ADN)

14.2.1 UN Number

No dangerous good in sense of this transport regulation.

14.2.2 UN Proper shipping name :

No dangerous good in sense of this transport regulation.

14.2.3 Transport hazard class(es):

No dangerous good in sense of this transport regulation.

14.2.4 Packing group:

No dangerous good in sense of this transport regulation.

### 14.3 Marine transport (IMDG)

14.3.1 UN Number

No dangerous good in sense of this transport regulation.

14.3.2 UN Proper shipping name :

No dangerous good in sense of this transport regulation.

14.3.3 Transport hazard class(es):

No dangerous good in sense of this transport regulation.

14.3.4 Packing group:

No dangerous good in sense of this transport regulation.

### 14.4 Air transport (ICAO-TI/IATA-DGR)

14.4.1 UN Number

No dangerous good in sense of this transport regulation.

14.4.2 UN Proper shipping name :

No dangerous good in sense of this transport regulation.

14.4.3 Transport hazard class(es):

No dangerous good in sense of this transport regulation.

14.4.4 Packing group:

No dangerous good in sense of this transport regulation.

### 14.5 Environmental hazards

No hazards defined.

### 14.6 Special precautions for user

No dangerous good in sense of this transport regulation.

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

No dangerous good in sense of this transport regulation.

### 14.8 Other applicable information

Not applicable. No hazardous material as defined by the transport regulations.

## 15. Transport information

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

Component

EINECS/ELINCS/NLP

Iron

231-096-4

Chromium

231-157-5

Nickel

231-111-4

Manganese

231-105-1

Component	REACH (1907/2006) Annex XIV - Substances Subject to Authorization	REACH (1907/2006) Annex XVII – Restriction on certain dangerous Substances	REACH (1907/2006) Article 59 – Candidate list of Substances of Very High Concern (SVHC)
Nickel		Use restricted, see Entry 27:  <a href="https://echa.europa.eu/documents/10162/3b-be9024-52a6-8e63-5581-e686331eb459">https://echa.europa.eu/documents/10162/3b-be9024-52a6-8e63-5581-e686331eb459</a>	

## 15.2 Chemical Safety Assessment

Chemical Safety Assessment/Reports (CSA/CSR) are not required for mixtures.

A safety data sheet for this product is legally not required and is provided as a courtesy to our customers.

## 16. Other information

### Changes

Updated 2023

Full text of H-statements referred to under sections 2 and 3

H317 – May cause an allergic skin reaction.  
H351 – Suspected of causing cancer.  
H373 - may cause damage to organs through prolonged or repeated exposure.  
H400 – Very toxic to aquatic life.

### ADN

European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

### ADR

European Agreement concerning the International Carriage of Dangerous Goods by Road.

### ATE

Acute Toxicity Estimate.

### BCF

Bioconcentration factor.

### BLV

Biological limit value.

### BOD

Biochemical oxygen demand.

### COD

Chemical oxygen demand.

### DMEL

Derived Minimal Effect level.

### DNEL

Derived-no Effect level.

### EC-NO.

European Community Number.

### EC50

Median effective concentration.

### EN

European standard.

### IARC

International Agency for Research on Cancer.

### IATA

International Air Transport Association.

### IMDG

International Maritime Dangerous goods.

### LC50

Median lethal concentration.

### LD50

Median lethal dose.

### LOAEL

Lowest Observed Adverse Effect level.

### NOAEL

No-Observed Adverse Effect Level.

### NOAEC

No-Observed Adverse Effect Concentration.

### NOEC

No-Observed effect Concentration.

### OECD

Organisation for Economic Co-operation and Development.

### OEL

Occupational Exposure Limit.

LD50	Lethal dose 50%.
LC50	Lethal concentration 50%.
EC50	Effective concentration 50%.
PBT	Persistent Bioaccumulative Toxic.
PNEC	Predicted No-Effect Concentration.
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail.
SDS	Safety Data Sheet.
STP	Sewage treatment plant.
THOD	Theoretical oxygen demand.
TLM	Median Tolerance Limit.
VOC	Volatile Organic Compounds.
CAS-NO.	Chemical Abstract Service number.
N.O.S	Not Otherwise Specified.
VPVB	Very Persistent and Very Bioaccumulative.
ED	Endocrine disrupting properties.
DOT	Department of Transport.
TDG	Transportation of Dangerous Goods.
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
EINECS/EL/INCS	European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances.
GHS	Globally Harmonized System of Classification, Labelling and Packaging of Chemicals.
IBC-CODE	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk.
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008.
MARPOL 73/78	MARPOL 73/78: International Convention for the Prevention of Pollution From Ships.
ADG	Transport of Australian Dangerous Goods.

## Further Information

Data of sections 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.

All intentionally added alloying elements in Stainless Steel with the exception of nickel are not classified as hazardous. Nickel is the only substance of major importance with regard to the hazard classification of stainless steels in the solid form. In accordance with (EC) Regulations 1272/2008 (CLP) and 790/2009 (ATP 1), nickel is classified as a Carcinogen Category 2, Specific Target Organ Toxicity Repeated Exposure 1 (STOT RE1) and Skin Sensitizer 1.

The exposure route for the carcinogenic Category 2 classification is inhalation. However Stainless Steel in solid form cannot be inhaled, only when it is in powder form. The risk of being exposed to nickel in stainless steel can therefore also only exist when the stainless steel is in powder form. Nevertheless, the European Classification is based on Hazard rather than on Risk. Therefore, it is the obligation of the steel industry to provide proof that stainless steel is safe. Even when steel is in powder form the likelihood of being exposed to nickel is far less than the pure metal thanks to the alloying effect. In other words when nickel is in the form of stainless it doesn't necessarily become available to the organism which is inhaling the stainless powder. It is not bio-available.

There are no hazards to the environment from stainless steel in the forms supplied.

Stainless steel is part of an integrated life cycle and it is a material that is 100% recyclable. Both manufacturing and post-consumer stainless steel scrap is valuable and in demand for the production of prime new stainless steel. Recycling routes are well-established, and recycling is therefore the preferred disposal route. While disposal to landfill is not harmful to the environment, it is a waste of resources and therefore to be avoided for the benefit of recycling and resource depletion

The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.