



According to directive 1907/2006/EC,2020/878 Page 1 from 11

Version 4.0 Revision date: 18-09-2024 Print date: 18-12-2024

Trade name: Iron powder natural

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

1.1 Product identification:

Product name: Iron powder natural.

Registration number (REACH): 01-2119462838-24-xxxx

EC no: 231-096-4 CAS no: 7439-89-6

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

Laboratory chemicals

Analytical and laboratory applications

Recommended restrictions on use: Not to be used for private purposes (household).

Food, drinks and animal feed.

1.3 Details of the supplier of the safety data sheet:

Responsible distributor: ASSYST bvba / A.S.O.W. bvba

Hellegatstraat 13a 2590 Berlaar Belgium

Tel: +32 495 50 61 14 / +32 496 83 70 27

Website: www.artsuppliesonweb.com Email: ao@assyst.org/vera.opsommer@assyst.org

1.4 Emergency phone number:

For Belgium: Call the **Poison Control Centre (070 245 245 - free)**, if

not available: **02 264 96 30** (normal rate) or your doctor. In life-threatening situations, always call the

European emergency number 112.

NHS 24 Direct For help from a GP, visit your GP surgery's website, use

an online service to contact your GP, or call the surgery. For urgent medical help, use the NHS 111 online service, or call 111 if you are unable to get help online. For life-threatening emergencies, call 999 for an ambulance. There is more information about getting

medical help on the NHS website.

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture:

Classification according to directive (EC) No 1272/2008 and its amendments.

Flammable solid 2 Flam, Sol. 2 H228

Substances or mixtures liable to self-heat 1 Self-heat. 1 H251

Full text of H-phrases can be found in section 16.

2.2 Labelling elements:

Labelling according to regulation (EC) No 1272/2008 [CLP/GHS]:



Hazard pictograms:

Signal word: Danger

Hazard statements: H228 Flammable solid.

H251 Susceptible to self-heating: may catch fire.

Safety recommendations Precautions - prevention:

P210 Keep away from heat, hot surfaces, sparks, open flames and other sources of ignition. Do not smoke. P243 Take measures to prevent discharges of static electricity.





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Precautions - reaction

P370+P378 In case of fire: extinguish with metal extinguishing powder.

Labelling of packages with a total content not exceeding 125 ml

Signal word: Danger



Hazard pictogram(s):

H251 Susceptible to self-heating: may catch fire.

Labelling of packages with a total content not exceeding 10 ml

Signal word: Not required Hazard pictogram(s): Not required Hazard statements: Not required Safety recommendations: Not required

2.3 Other hazards:

Results of PBT and vPvB assessment

The results of the assessment of the substance show that it is not a PBT or vPvB substance.

Endocrine-disrupting properties

Contains no endocrine disruptor (ED) at a concentration of \geq 0.1%.

SECTION 3: Composition and information on ingredients

3.1 Substances:

Substance name: Iron Molecular formula: Fe

Molar mass: 55.85 g/mol

REACH reg. no: 01-2119462838-24-xxxx

CAS no: 7439-89-6 EC no: 231-096-4

SECTION 4: First aid measures

4.1 Description of first-aid measures:

General comments:

Remove contaminated clothing.

By inhalation: Provide fresh air.

If in doubt or if symptoms persist, consult a doctor.

On skin contact:

Rinse/shower skin with water.

If in doubt or if symptoms persist, consult a doctor.

On eye contact:

Rinse gently with water for several minutes.

If in doubt or if symptoms persist, consult a doctor.

If swallowed:

Rinsing the mouth.

If you feel unwell, consult a doctor.

4.2 Main acute and delayed symptoms and effects:

Irritant effects, Nausea, Vomiting.

4.3 Indication of immediate medical attention and special treatment required:

No





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SECTION 5: Fire-fighting measures

5.1 Extinguishing media:

Suitable extinguishing agents:

Match fire-fighting measures to environment.

D-powder, sand.

Unsuitable extinguishing media:

Water, foam.

5.2 Special hazards arising from the substance or mixture:

Susceptible to self-heating: may catch fire.

5.3 Advice for firefighters:

In case of fire and/or explosion, avoid breathing fumes.

With normal precautions, extinguish from a reasonable distance.

Wear self-contained breathing apparatus.

SECTION 6: Measures in case of accidental release of the substance or mixture

6.1 Personal precautions, protective equipment and emergency procedures:

For persons other than emergency services:

Avoid contact with skin, eyes and clothing.

Do not inhale dust.

6.2 Environmental precautions:

Avoid getting the product into drains, surface water or groundwater.

Retain and remove contaminated wash water.

6.3 Methods and materials for containment and cleaning:

Advice on how to contain the spill:

Covering drains.

Mechanical recording.

Advice on how to clean up the spill:

Mechanical recording.

Combating dust formation.

Other information relating to discharge or release:

Put into suitable retainers for disposal.

6.4 Reference to other sections:

 $\label{lem:hazardous combustion products: see section 5.}$

Personal protective equipment: see section 8.

Incompatible materials: see section 10.

Instructions for disposal: see section 13.

SECTION 7: Handling and storage:

7.1 Precautions for safe handling of the substance or mixture:

Avoid dust generation.

Measures to prevent fire and aerosol or dust formation

Removal of dust deposits.

Advice on general occupational hygiene:

Wash hands before work breaks and end of work.

Keep away from food, drink and animal feed.

Do not smoke during use.

7.2 Conditions for safe storage, including incompatibilities:

Store in a dry place.

Keep in tightly closed container.

Incompatible substances or mixtures:

Note advice for chemical storage.

Incompatible materials: see section 10.





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Keep/store away from oxidising substances.

Consideration of other advice:

Ventilation requirements

Use of local and general ventilation.

Recommended storage temperature:

15 - 25°C

7.3 Specific end use:

No information is available.

SECTION 8: Exposure controls/personal protection measures

8.1 Control parameters:

National limits

Occupational exposure limits (occupational exposure limits):

Country	Substance name	CAS No.	Identification	TGG 8 hours [mg/m³]	TGG 15 min [mg/m³]	CW [mg/m³]	Notation	Source
BE	particles not		VL/VCD	10			i	Belgian
	elsewhere							Official
	classified							Journal
BE	particles not		VL/VCD	3			r	Belgian
	elsewhere							Official
	classified							Journal

Notation

CW: Ceiling value is a limit value that must not be exceeded (ceiling value)

i: Inhalable fraction r: Respirable fraction

TGG 15 min: Short-time value (short-term exposure limit value): limit value that should not be exceeded and which applies,

for a period of 15 minutes (unless otherwise stated)

TGG 8 hours: Time-weighted average (long-term exposure limit): measured or calculated from an eight-hour reference period

(unless otherwise stated)

8.2 Exposure control measures:

Individual protection measures (personal protective equipment)

Eye/face protection:

Wear safety goggles with side protection.

Skin protection:

Hand protection

Wear suitable gloves.

Suitable are EN 374-tested gloves against chemicals.

Type of material:

NBR (nitrile rubber)

Material thickness:

>0.11 mm

Breakthrough time of glove material:

>480 minutes (permeation level: 6)

Other protective equipment:

Insert rest periods for skin regeneration.

Preventive skin protection (skin-protective creams) is recommended.

Respiratory protection:

Respiratory protection is necessary in case of: Dust generation.

Particle filter (EN 143).

P1 (filters at least 80% of air particles, colour code: white).

Managing environmental exposure:

Avoid getting the product into drains, surface water or groundwater.





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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Physical state: solid
Form: powder
Colour: grey
Odour: odourless
Melting/freezing point: 1.538 °C
Boiling point or initial boiling point and boiling range: 2.735 °C

Flammability: flammable solid according to GHS criteria

self-heating substance according to GHS criteria

Lower and upper explosion limit: 100 g/m³ (LEL)
Flash point: not applicable
Self-ignition temperature: undetermined
Decomposition temperature: irrelevant
pH value: not applicable
Kinematic viscosity: irrelevant

Solubility(s)

Solubility in water: (insoluble (< 1 mg/l))

Partition coefficient

Partition coefficient n-octanol/water (log value): not relevant (inorganic)

Vapour pressure: not determined

Density and/or relative density

Density: 7.87 g/cm³ at 20 °C (ECHA)

Relative vapour density: irrelevant (solid)
Bulk density: 2,500 - 3,500 kg/m³

Particle characteristics:

Particle size: $^{\sim}10 \ \mu m$.

Other safety parameters

Oxidising properties: no

9.2 Other information

Information on physical hazard classes: There is no further information.

Other safety features:

Temperature class (EU, according to ATEX):

Maximum permissible surface temperature of the

equipment: 135 °C

SECTION 10: Stability and reactivity

10.1 Reactivity:

It is a reactive substance.

Danger of ignition.

Self-healing property.

When heated

Danger of ignition.

Danger of self-ignition.

10.2 Chemical Stability:

The material is stable under normal atmospheric conditions and expected temperature and pressure during storage and handling.

10.3 Potential Hazardous Reactions:

Violent reaction with: strong oxidising, Aldehyde, Ammonium compounds, Chlorine, Fluorine, Nitrate, Perchlorates, Peroxides, Acids, Hydrogen sulphide (H_2S), Water, Hydrogen peroxide, => Explosion hazard 10.4 Conditions to avoid:

Keep away from heat, hot surfaces, sparks, open flames and other sources of ignition.





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No smoking.

Protect against moisture.

10.5 Chemically Interacting Materials:

There is no further information.

10.6 Hazardous Decomposition Products:

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects:

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity:

Is not classifiable as acutely toxic.

Acute toxicity					
Route of exposure	End point	Value	Species	Method	Source
Oral	LD50	30,000 mg/kg	Rat		TOXNET

Skin corrosion/irritation:

Is not classifiable as corrosive/irritating to the skin.

Serious eye damage/eye irritation:

Cannot be classified as severely eye-injurious or irritating to the eyes.

Respiratory or skin sensitisation:

Is not classifiable as inhalant or skin allergenic.

Mutagenicity in gametes:

Is not classifiable as mutagenic in germ cells (mutagenic).

Carcinogenicity:

Is not classifiable as carcinogenic.

Reproductive toxicity:

Is not classifiable as a reproductive toxicant.

Specific target organ toxicity at single exposure:

Cannot be classified as toxic to specific target organs (single exposure).

Specific target organ toxicity on repeated exposure:

Cannot be classified as toxic to specific target organs (repeated exposure).

Inhalation hazard:

Is not classifiable as dangerous in aspiration.

Symptoms related to physical, chemical and toxicological properties:

- After swallowing:

diarrhoea, vomiting, nausea, gastrointestinal distress.

- In case of contact with eyes:

causes mild to moderate irritation.

- After inhalation:

Inhaling dust can cause respiratory irritation.

- On contact with skin:

No data are available.

- Other information:

Other adverse effects: Cardiovascular system.

11.2 Endocrine disrupting properties

Contains no endocrine disruptor (ED) at a concentration of \geq 0.1%.

11.3 Information on other hazards

There is no further information.

SECTION 12: Ecological information

12.1 Toxicity:

Cannot be classified as hazardous to the aquatic environment.





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12.2 Persistence and Degradability:

No data are available.

12.3 Bioaccumulation:

No data are available.

12.4 Mobility in soil:

No data are available.

12.5 Results of PBT and vPvB assessment:

No data are available.

12.6 Endocrine disrupting properties

Contains no endocrine disruptor (ED) at a concentration of \geq 0.1%.

12.7 Other adverse effects

No data are available.

SECTION 13: Disposal instructions

13.1 Waste treatment methods:

Dispose of this substance and its packaging as hazardous waste.

Dispose of contents/packaging in accordance with local/regional/national/international regulations.

Recycling/reclamation of metals and metal compounds.

Information regarding wastewater discharge:

Do not throw waste into the sink.

Waste treatment of containers/packaging

It is hazardous waste; only approved packaging (e.g. in accordance with ADR) may be used.

Contaminated packaging can be treated like the substance itself.

Fully emptied containers can be recycled.

Relevant provisions on waste prevention

The allocation of waste key numbers/waste markings should be industry- and process-specific in accordance with AVV.

Hazardous properties of waste

HP 3 flammable

Notes:

Waste is separated into the categories that can be treated separately by local or national waste management

Please note the relevant national or regional provisions.

Uncontaminated and completely empty containers can be used again.

SECTION 14: Information relating to transport

14.1	UN	number

ADR/RID/ADN: UN 3089
IMDG Code: VN 3089
ICAO-TI: UN 3089

14.2 Proper cargo name according to UN model regulations

ADR/RID/ADN: FLAMMABLE METAL POWDER, N.O.S. IMDG Code: METAL POWDER, FLAMMABLE, N.O.S. ICAO-TI: Metal powder, flammable, n.o.s.

14.3 Transport hazard class(es)

ADR/RID/ADN: 4.1 IMDG Code: 4.1 ICAO-TI: 4.1

14.4 Packing group

ADR/RID/ADN: III
IMDG Code: III
ICAO-TI: III



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14.5 Environmental hazards

not hazardous to the environment, according to regulations on the transport of dangerous goods

14.6 Special precautions for the user

The provisions for dangerous goods (ADR) must also be complied with in the company. 14.7 Transport in bulk in accordance with Annex II to MARPOL 73/78 and the IBC Code

The cargo is not meant to be transported in bulk. 14.8 Information for each of the UN regulations

Transport of dangerous goods by road, rail or inland waterway (ADR/RID/ADN) - Additional information:

Proper shipping name: FLAMMABLE METAL POWDER, N.O.S.

Data on transport document: UN3089, FLAMMABLE METAL POWDER, N.O.S., 4.1, III,

(E)

Classification code: F3
Danger labels: 4.1
Special provisions: 552
Exempt quantities (EQ): E1
Limited quantities (LQ): 5 kg
Transport category: 3
Tunnel restriction code: E
Hazard Identification Number (GEVI): 40

International Maritime Dangerous Goods Code (IMDG) - Additional information:

Proper shipping name: METAL POWDER, FLAMMABLE, N.O.S.

Data on the transport document (shipper's

declaration): UN3089, METAL POWDER, FLAMMABLE, N.O.S., 4.1, III

Marine pollutant (Marine Pollutant):-Danger labels:4.1Special provisions:223Exempt quantities (EQ):E1

Limited quantities (LQ): 5 kg
EmS: F-G, S-G
Stowage category: A

Segregation group: 7 - Heavy metals and their salts

15 - Metals in powder form

International Civil Aviation Organisation (ICAO-IATA/DGR) - Additional information:

Proper shipping name: Metal powder, flammable, n.o.s.

Data on the transport document (shipper's

declaration): UN3089, Metal powder, flammable, n.o.s., 4.1, III

Danger labels:4.1Special provisions:A3Exempt quantities (EQ):E1Limited quantities (LQ):10 kg

SECTION 15: Statutory information

15.1 Safety, health and environmental regulations and legislation specific to the substance or mixture:

Relevant European Union (EU) provisions

Restrictions in accordance with REACH, Annex XVII:

Restricted hazardous substances (REACH, Annex XVII)				
Name of substance	Name according to inventory	CAS No.	Restriction	No.
Iron	flammable / pyrophoric		R40	40

Legend

R40

^{1.} Shall not be used as substances or in mixtures in aerosols marketed for supply to the general public for entertainment or decorative purposes, such as:

[✓] metallic glitter (mainly intended as a decorative item);





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- ✓ artificial snow and frost (decorative item);
- √ "fart pads" (fop article);
- √ "silly string";
- √ fake scrolls (fop article);
- ✓ party horns (entertainment article);
- ✓ flakes and foam (decoration article);
- ✓ imitation spider webs (fop article);
- ✓ stink bombs (jest article).
- 2. Without prejudice to the application of other Community provisions relating to the classification, packaging and labelling of substances, suppliers shall ensure before placing on the market that the packaging of the aerosols referred to above is marked visibly, legibly and indelibly as follows: "Intended for professional users only".
- 3. However, paragraphs 1 and 2 shall not apply to aerosols referred to in Article 8(1a) of Council Directive 75/324/EEC (2).
- 4. Aerosols referred to in points 1 and 2 shall not be placed on the market unless they comply with the requirements referred to in those points.

List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list:

Not stated.

Seveso Directive

2012/18/EU (Seveso III):

Not granted.

Decopaint Directive:

VOC content: 0 %
VOC content: 0 g/l

Directive on industrial emissions (IE Directive)
VOC content: 0 %.
VOC content: 0 g/l

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS):

Not stated.

Regulation on the establishment of a European Pollutant Release and Transfer Register (PRTR):

Not stated

Water Framework Directive (WFD):

Name of substance Name according to inventory CAS No. Included in Comments Iron Metals and metal compounds a)	List of pollutants (WFD)					
Iron Metals and metal compounds a)	Name of substance	Name according to inventory	CAS No.	Included in	Comments	
	Iron	Metals and metal compounds		a)		

Legend

(a) Indicative list of the main pollutants

Regulation on the marketing and use of explosives precursors:

Not stated.

Regulation on drug precursors:

Not stated.

Regulation on ozone-depleting substances:

Not stated.

Regulation on the Import and Export of Dangerous Chemicals (PIC):

Not stated.

Regulation on persistent organic pollutants (POPs):

Not stated.

Other information:

Directive 94/33/EC on the protection of young people at work.

Observe work restrictions in accordance with the Pregnancy Directive (92/85/EEC) for expectant or nursing mothers.

National inventories

Country	List	Status
AU	AIIC	Fabric is mentioned
CA	DSL	Fabric is mentioned
CN	IECSC	Fabric is mentioned
EU	ECSI	Fabric is mentioned





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EU	REACH Reg.	Fabric is mentioned
KR	KECI	Fabric is mentioned
MX	INSQ	Fabric is mentioned
NZ	NZIoC	Fabric is mentioned
PH	PICCS	Fabric is mentioned
TR	CICR	Fabric is mentioned
TW	TCSI	Fabric is mentioned
US	TSCA	substance is listed (ACTIVE)
UN	NCI	Fabric is mentioned

Legend

AIIC: Australian Inventory of Industrial Chemicals CICR: Chemical Inventory and Control Regulation

DSL: Domestic Substances List (DSL)
ECSI: EC inventory (EINECS, ELINCS, NLP)

IECSC: Inventory of Existing Chemical Substances Produced or Imported in China

INSQ: National Inventory of Chemical Substances
KECI: Korea Existing Chemicals Inventory
NCI: National Chemical Inventory
NZIOC: New Zealand Inventory of Chemicals

PICCS: Philippine Inventory of Chemicals and Chemical Substances (PICCS)

REACH Reg: REACH registered substances
TCSI: Taiwan Chemical Substance Inventory

TSCA: Toxic Substance Control Act

15.2 Chemical safety assessment:

According to REACH, Article 14(1), a chemical safety assessment has been carried out for this substance or components of this mixture when the substance has been registered in quantities of 10 tonnes or more per year per registrant.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Heading 2.2 Labelling of packages with a total content not exceeding 125 ml: change in the list

(table)

Section 2.2 Labelling of packets with a total content not exceeding 10 ml

List of relevant sentences (code and full text as mentioned in sections 2 and 3)

H228 Flammable solid.

H251 Susceptible to self-heating: may catch fire.

Abbreviations and acronyms:

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road (ADR Agreement); AIIC -Australian Inventory of Industrial Chemicals; ASTM - American Association for the Testing of Materials; bw - Body Weight; CLP - Regulation on Classification, Labelling and Packaging; Regulation (EC) No 1272/2008; CMR -Carcinogenic, mutagenic or toxic to reproduction; DIN - Standard or the German Institute for Standardisation; DSL - List of substances used indoors (Canada); ECHA - European Chemicals Agency; EC-Number - EINECS number; ECx - Concentration associated with x% response; ELx - Charge capacity associated with x% response; EmS -Emergency Schedule; ENCS - Existing and New Chemicals (Japan); ErCx - Concentration associated with x% growth response; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - IMO International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk; IC50 - Half-Maximum Inhibitory Concentration; ICAO - International Civil Aviation Organisation; IECSC - Inventory List of Existing Chemicals in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL -Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korean Inventory of Existing Chemicals; LC50 - Lethal concentration for 50% of a test population; LD50 - Lethal dose for 50% of a test population (lethal dose median); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not otherwise specified; NO(A)EC - No discernible (negative) effect on concentration; NO(A)EL





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- No discernible (negative) effect on Level; NOELR - No discernible effect on cargo capacity; NZIOC - New Zealand inventory of chemicals; OECD - Organisation for Economic Co-operation and Development OECD; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, bioaccumulative and toxic substance; PICCS - Philippine inventory of chemicals and chemical substances; (Q)SAR - (Quantitative) structure-activity relationships; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH); RID - Regulations concerning the International Carriage of Dangerous Goods by Rail (RID); SADT - Self-accelerating decomposition temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwanese Inventory of Chemical Substances; TECI - Inventory of Chemical Substances Existing in Thailand; TRGS - Technical Regulation on Hazardous Substances; TSCA - Toxic Substances Control Act (USA); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Key literature references and data sources:

Regulation (EC) No 1272/2008 on classification, labelling and packaging (CLP) of substances and mixtures. Regulation (EC) No 1907/2006 (REACH), amended by 2020/878/EU. Transport of dangerous goods by road, rail or inland waterways (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for aviation (IATA).

Disclaimer

This information is based on the current state of our knowledge.

This safety data sheet is compiled and intended exclusively for this product.