

# Safety Data Sheet

According to Annex II to REACH - Regulation 2020/878 and to Annex II to UK REACH

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

### 1.1. Product identifier

Code: FERCA  
Product name: FERCA - Carbonyl iron powder  
EC number: 231-096-4  
CAS number: 7439-89-6  
Registration Number: 01-2119462838-24-0000

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

Intended use: Carbonyl iron powder

Identified Uses	Industrial	Professional	Consumer
Laboratory chemists, Production of chemicals	✓	-	-
Powder metallurgy	✓	-	-

### 1.3. Details of the supplier of the safety data sheet

Name: LINBRAZE S.R.L.  
Full address: C/da Torre Chimera SP180  
District and Country: 93019 Sommatino (CL) Italia  
Tel.: +39 0922 871694  
Fax: +39 0922 709064

e-mail address of the competent person responsible for the Safety Data Sheet: [sds@linbraze.com](mailto:sds@linbraze.com)

Supplier: LINBRAZE S.r.l.

### 1.4. Emergency telephone number

For urgent inquiries refer to:

- Bulgaria  
Информационни служби при спешни случаи / официален консултативен орган:  
Национален токсикологичен информационен център,  
Многопрофилна болница за активно лечение и спешна медицина "Н.И.Пирогов"  
Телефон за спешни случаи / факс: +359 2 9154 213, E-mail: [pirogov@pirogov.bg](mailto:pirogov@pirogov.bg), <http://www.pirogov.eu>
- Czech Republic  
Telefonní číslo pro naléhavé situace 112 Toxikologické informační středisko, Klinika pracovního lékařství VFN a 1. LF UK, Na Bojišti 1, 120 00, Praha 2,  
tel: 224 919 293 a 224 915 402.

- Denmark  
Danish Environmental Protection Agency  
Haraldsgade 53, 2100 København Ø, Denmark  
+45 72 54 40 00  
82 12 12 12 (Giftlinjen – døgnåben alle dage)

- Hungary  
Baleset, veszély esetén hívható telefonszám (munkanapokon:  
07-1520 h): 06 34 526 210  
Egészségügyi Toxikológiai Tájékoztató Szolgálat (ETTSZ 1096  
Budapest, Nagyvárad tér 2.)  
Tel.: +36 80 201-199 (0-24 h, díjmentesen hívható)

-Netherlands  
National Poisons Information Center / University Medical Center  
Utrecht  
PO Box 85500, 3508 GA Utrecht, The Netherlands  
+31 88 75 585 61

- Poland  
Bureau for Chemical Substances  
30/34 Dowborczykow Street, 90-019 Lodz, Poland  
+48 42 2538 400

- Romania  
Serviciile de informare în caz de urgență / Organismul consultativ  
oficial: Institutul Național de Sănătate Publică, Tel. 021.318.36.06  
(direct) (Apel cu taxa normala) Contact: infotox@insp.gov.ro  
Apelabil între orele 8:00 - 15:00 Număr de telefon al societății  
pentru urgențe: +49 (0) 700 / 24 112 112 (LMR)

- Slovakia  
National Toxicological Information Centre  
Limbova 5, 833 05 Bratislava, Slovakia  
+421 2 5465 2307

- Sweden  
Swedish Poisons Information Centre  
Giftinformationscentralen 171 76 Stockholm, Sweden  
+46 104 566 750

## SECTION 2. Hazards identification

### 2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878.

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Specific target organ toxicity - repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.
Skin irritation, category 2	H315	Causes skin irritation.
Specific target organ toxicity - single exposure,		

### SECTION 2. Hazards identification ... / >>

category 3

H335

May cause respiratory irritation.

#### 2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words:

Warning

Hazard statements:

**H373** May cause damage to organs through prolonged or repeated exposure.  
**H315** Causes skin irritation.  
**H335** May cause respiratory irritation.

Precautionary statements:

**P201** Obtain special instructions before use.  
**P234** Keep only in original packaging.  
**P260** Do not breathe dust / fume / gas / mist / vapours / spray.  
**P271** Use only outdoors or in a well-ventilated area.  
**P280** Wear protective gloves/ protective clothing / eye protection / face protection.  
**P302+P352** IF ON SKIN: Wash with plenty of water / . . .  
**P304+P340** IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
**P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**P312** Call a POISON CENTRE / doctor / . . . if you feel unwell.  
**P314** Get medical advice / attention if you feel unwell.  
**P332+P313** If skin irritation occurs: Get medical advice / attention.  
**P337+P313** If eye irritation persists: Get medical advice / attention.  
**P403** Store in a well-ventilated place.  
**P404** Store in a closed container.  
**P407** Maintain air gap between stacks or pallets.  
**P411** Store at temperatures not exceeding . . .°C / . . .°F.  
**P420** Store separately.  
**P501** Dispose of contents / container to . . .

**Contains:** IRON

Nr. EC: 231-096-4

#### 2.3. Other hazards

The substance does not have persistence, bioaccumulation and toxicity (PBT) properties and is not very persistent and very bioaccumulative. (vPvB).

The substance does not have endocrine disrupting properties.

### SECTION 3. Composition/information on ingredients

#### 3.1. Substances

Contains:

Identification	Conc. %	Classification (EC) 1272/2008 (CLP)
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# LINBRAZE S.R.L.

## FERCA - Carbonyl iron powder

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EN

### SECTION 3. Composition/information on ingredients ... / >>

**IRON**  
*INDEX* 100  
*EC* 231-096-4  
*CAS* 7439-89-6  
*REACH Reg.* 01-2119462838-24-0000

The full wording of hazard (H) phrases is given in section 16 of the sheet.

#### 3.2. Mixtures

Information not relevant

### SECTION 4. First aid measures

#### 4.1. Description of first aid measures

Not specifically necessary. Observance of good industrial hygiene is recommended.

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

No episodes of damage to health ascribable to the product have been reported.

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

Information not available

### SECTION 5. Firefighting measures

#### 5.1. Extinguishing media

##### SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

##### UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

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

##### HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products. The product is combustible and, when the powder is released into the air in sufficient concentrations and in the presence of a source of ignition, it can create explosive mixtures with air. Fires may start or get worse by leakage of the solid product from the container, when it reaches high temperatures or through contact with sources of ignition.

#### 5.3. Advice for firefighters

##### GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

##### SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

## **SECTION 6. Accidental release measures**

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

Use breathing equipment if fumes or powders are released into the air. These indications apply for both processing staff and those involved in emergency procedures.

### **6.2. Environmental precautions**

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

### **6.3. Methods and material for containment and cleaning up**

Confine using earth or inert material. Collect as much material as possible and eliminate the rest using jets of water. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

### **6.4. Reference to other sections**

Any information on personal protection and disposal is given in sections 8 and 13.

## **SECTION 7. Handling and storage**

### **7.1. Precautions for safe handling**

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use.

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

Keep the product in clearly labelled containers. Keep containers away from any incompatible materials, see section 10 for details.

### **7.3. Specific end use(s)**

Information not available

## **SECTION 8. Exposure controls/personal protection**

### **8.1. Control parameters**

During the risk assessment process, it is essential to take into consideration the ACGIH occupational exposure levels for inert particulate not otherwise classified (PNOC respirable fraction: 3 mg/m<sup>3</sup>; PNOC inhalable fraction: 10 mg/m<sup>3</sup>). For values above these limits, use a P type filter, whose class (1, 2 or 3) must be chosen according to the outcome of risk assessment.

### **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).

### SECTION 8. Exposure controls/personal protection ... / >>

#### 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.

#### SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 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).

#### RESPIRATORY PROTECTION

Use a type P filtering facemask, whose class (1, 2 or 3) and effective need, must be defined according to the outcome of risk assessment (see standard EN 149).

#### ENVIRONMENTAL EXPOSURE CONTROLS

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

#### 9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	powder	
Colour	dark grey	
Odour	not available	
Melting point / freezing point	1535 °C	
Initial boiling point	2750 °C	
Flammability	not available	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	not applicable	
Auto-ignition temperature	not available	
Decomposition temperature	not available	
pH	not available	
Kinematic viscosity	not available	
Solubility	insoluble in water	
Partition coefficient: n-octanol/water	not available	
Vapour pressure	not available	
Density and/or relative density	7,87	
Relative vapour density	not available	
Particle characteristics	not available	

#### 9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

Information 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.

#### 10.2. Chemical stability

## **SECTION 10. Stability and reactivity ... / >>**

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

### **10.3. Possibility of hazardous reactions**

The powders are potentially explosive when mixed with air.

### **10.4. Conditions to avoid**

Avoid environmental dust build-up.

### **10.5. Incompatible materials**

Information not available

### **10.6. Hazardous decomposition products**

Information not available

## **SECTION 11. Toxicological information**

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

#### Metabolism, toxicokinetics, mechanism of action and other information

Information not available

#### Information on likely routes of exposure

Information not available

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

#### Interactive effects

Information not available

#### ACUTE TOXICITY

Does not meet the classification criteria for this hazard class

#### SKIN CORROSION / IRRITATION

Causes skin irritation

#### SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

#### RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

#### GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

## **SECTION 11. Toxicological information ... / >>**

### CARCINOGENICITY

Does not meet the classification criteria for this hazard class

### REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

### STOT - SINGLE EXPOSURE

May cause respiratory irritation

### STOT - REPEATED EXPOSURE

May cause damage to organs

### ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

## **11.2. Information on other hazards**

Based on the available data, the substance is not listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

## **SECTION 12. Ecological information**

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

### **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**

The substance does not have persistence, bioaccumulation and toxicity (PBT) properties and is not very persistent and very bioaccumulative. (vPvB).

### **12.6. Endocrine disrupting properties**



## **SECTION 12. Ecological information ... / >>**

Based on the available data, the substance is not listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

### **12.7. Other adverse effects**

Information not available

## **SECTION 13. Disposal considerations**

### **13.1. Waste treatment methods**

Reuse, when possible. Product residues 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.

#### **CONTAMINATED PACKAGING**

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

## **SECTION 14. Transport information**

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

### **14.1. UN number or ID number**

not applicable

### **14.2. UN proper shipping name**

not applicable

### **14.3. Transport hazard class(es)**

not applicable

### **14.4. Packing group**

not applicable

### **14.5. Environmental hazards**

not applicable

### **14.6. Special precautions for user**

not applicable

### **14.7. Maritime transport in bulk according to IMO instruments**

Information not relevant

## SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EU: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006  
None

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors  
not applicable

Substances in Candidate List (Art. 59 REACH)  
On the basis of available data, the product does not contain any SVHC in percentage  $\geq$  than 0,1%.

Substances subject to authorisation (Annex XIV REACH)  
None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:  
None

Substances subject to the Rotterdam Convention:  
None

Substances subject to the Stockholm Convention:  
None

Healthcare controls  
Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

### 15.2. Chemical safety assessment

Has not been performed / is not yet available a chemical safety assessment for the substance.

## SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

<b>STOT RE 2</b>	Specific target organ toxicity - repeated exposure, category 2
<b>Skin Irrit. 2</b>	Skin irritation, category 2
<b>STOT SE 3</b>	Specific target organ toxicity - single exposure, category 3
<b>H373</b>	May cause damage to organs through prolonged or repeated exposure.
<b>H315</b>	Causes skin irritation.
<b>H335</b>	May cause respiratory irritation.

#### LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number

**SECTION 16. Other information ... / >>**

- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 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: 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: Regulation (EC) 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: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

**GENERAL BIBLIOGRAPHY**

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
  2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
  3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
  4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
  5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
  6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
  7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
  8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
  9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
  10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
  11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
  12. Regulation (EU) 2016/1179 (IX Atp. CLP)
  13. Regulation (EU) 2017/776 (X Atp. CLP)
  14. Regulation (EU) 2018/669 (XI Atp. CLP)
  15. Regulation (EU) 2019/521 (XII Atp. CLP)
  16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
  17. Regulation (EU) 2019/1148
  18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
  19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
  20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
  21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
  22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
- The Merck Index. - 10th Edition

**SECTION 16. Other information ... / >>**

- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

**Note for users:**

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

**CALCULATION METHODS FOR CLASSIFICATION**

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

**Changes to previous review:**

The following sections were modified:

01 / 02 / 09 / 11 / 12 / 15 / 16.