

# SAFETY DATA SHEET

(in accordance with Regulation (EU) 2015/830)



## CAST IRON

Version: 4  
Revision date: 19/01/2018

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### SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING.

#### 1.1 Product identifier.

Product Name: CAST IRON  
Chemical Name: iron  
CAS No: 7439-89-6  
EC No: 231-096-4  
Registration No: 01-2119462838-24-XXXX

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

Pyrotechnical compositions

#### Uses advised against:

Uses other than those recommended.

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

Company: **ALDEBARÁN SISTEMAS SL**  
Address: C/Jerónimo Zurita, 10, entlo izda, 50001  
City: Zaragoza  
Province: Zaragoza  
Telephone: 0034976796134  
E-mail: aldebaran@aldebaransistemas.com

#### 1.4 Emergency telephone number: 0034915620420 (Available 24 hours)

### SECTION 2: HAZARDS IDENTIFICATION.

#### 2.1 Classification of the substance.

The product is not classified as hazardous within the meaning of Regulation (EU) No 1272/2008.

#### 2.2 Label elements.

Contains:  
iron

#### 2.3 Other hazards.

In normal use conditions and in its original form, the product itself does not involve any other risk for health and the environment.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS.

#### 3.1 Substances.

Chemical Name: iron  
CAS No: 7439-89-6  
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#### 3.2 Mixtures.

Not Applicable.

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### SECTION 4: FIRST AID MEASURES.

#### 4.1 Description of first aid measures.

Due to the composition and type of the substances present in the product, no particular warnings are necessary

##### Inhalation.

Place the injured person in the open air, keep him warm and at rest, if breathing is irregular or stops, give artificial respiration. Do not administer anything oral way. If unconscious, place in proper position and seek medical advice.

##### Eye contact.

In case of wearing contact lenses, remove them. Wash the eyes thoroughly with clean, cool water for at least 10 minutes, pulling up on the eyelids and seek medical attention.

##### Skin contact.

Remove contaminated clothing. Wash the skin vigorously with soap and water or a suitable skin cleanser. NEVER use solvents or thinners.

##### Ingestion.

If accidentally swallowed, seek immediate medical attention. Keep him at rest. NEVER induce vomiting.

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

No known acute or delayed effects from exposure to the product.

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

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

### SECTION 5: FIREFIGHTING MEASURES.

#### 5.1 Extinguishing media.

##### Suitable extinguishing media:

Use extinguishing measures that are appropriate to the circumstances and their surroundings. Keep containers and surroundings cool with water spray. It is preferable to confine and quench fires than to give them water. Use: Dry powder, chemical powder.

##### Unsuitable extinguishing media:

Do not use a direct stream of water to extinguish

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

##### Special risks.

No material to mention especially.

#### 5.3 Advice for firefighters.

Refrigerate tanks, cisterns or containers near the source of heat or fire with water. Take into account the direction of the wind. Prevent products used in fire fighting from entering drains, sewers or waterways.

##### Fire protection equipment.

Depending on the size of the fire, it may be necessary to wear protective clothing, self-contained breathing apparatus, gloves, goggles or face masks and boots.

### SECTION 6: ACCIDENTAL RELEASE MEASURES.

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

For exposure control and individual protection measures, see section 8.

#### 6.2 Environmental precautions.

Product not classified as hazardous for the environment, avoid spillage as much as possible.

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

The contaminated area should be immediately cleaned with an appropriate de-contaminator. Pour the decontaminator on the remains in an opened container and let it act various days until no further reaction is produced.

### 6.4 Reference to other sections.

For exposure control and individual protection measures, see section 8.  
For later elimination of waste, follow the recommendations under section 13.

## SECTION 7: HANDLING AND STORAGE.

### 7.1 Precautions for safe handling.

The product does not require special handling measures, the following general measures are recommended:  
For personal protection, see section 8. Never use pressure to empty the containers. They are not pressure-resistant containers.  
In the application area, smoking, eating, and drinking must be prohibited.  
Follow legislation on occupational health and safety.  
Keep the product in containers made of a material identical to the original.

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

The product does not require special storage measures.  
As general storage measures, sources of heat, radiation, electricity and contact with food should be avoided.  
Keep away from oxidising agents and from highly acidic or alkaline materials.  
Store the containers between 5 and 35° C, in a dry and well-ventilated place.  
Store according to local legislation. Observe indications on the label.  
The product is not affected by Directive 2012/18/EU (SEVESO III).

### 7.3 Specific end use(s).

Pyrotechnical mixtures

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION.

### 8.1 Control parameters.

The product does NOT contain substances with Professional Exposure Environmental Limit Values. The product does NOT contain substances with Biological Limit Values.  
Concentration levels DNEL/DMEL:

| Name  | DNEL/DMEL         | Type                                 | Value                  |
|---|-------------------|--------------------------------------|------------------------|
| iron<br>CAS No: 7439-89-6<br>EC No: 231-096-4 | DNEL<br>(Workers) | Inhalation, Long-term, Local effects | 3 (mg/m <sup>3</sup> ) |

DNEL: Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.

DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum.

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### 8.2 Exposure controls.

#### Measures of a technical nature:

Provide adequate ventilation, which can be achieved by using good local exhaust-ventilation and a good general exhaust system.

|  |  |
|--|--|
| <b>Concentration:</b>  | <b>100 %</b>   |
| <b>Uses:</b>   | <b>Pyrotechnical compositions</b>  |
| <b>Breathing protection:</b>   |  |
| If the recommended technical measures are observed, no individual protection equipment is necessary. |  |
| <b>Hand protection:</b>  |  |
| If the product is handled correctly, no individual protection equipment is necessary.                |  |
| <b>Eye protection:</b>   |  |
| If the product is handled correctly, no individual protection equipment is necessary.                |  |
| <b>Skin protection:</b>  |  |
| PPE:   | Work footwear.   |
| Characteristics:   | «CE» marking, category II.   |
| CEN standards:   | EN ISO 13287, EN 20347   |
| Maintenance:   | This product adapts to the first user's foot shape. That is why, as well as for hygienic reasons, it should not be used by other people. |
| Observations:  | Work footwear for professional use includes protection elements aimed at protecting users against any injury resulting from an accident  |

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES.

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

Appearance: Powder  
Colour: N.A./N.A.  
Odour: Inodoro  
Odour threshold: N.A./N.A.  
pH: N.A./N.A.  
Melting point: 1538 °C  
Boiling Point: N.A./N.A.  
Flash point: N.A./N.A.  
Evaporation rate: N.A./N.A.  
Inflammability (solid, gas): N.A./N.A.  
Lower Explosive Limit: N.A./N.A.  
Upper Explosive Limit: N.A./N.A.  
Vapour pressure: N.A./N.A.  
Vapour density: N.A./N.A.  
Relative density: N.A./N.A.  
Solubility: Insoluble en agua  
Liposolubility: N.A./N.A.  
Hydrosolubility: N.A./N.A.  
Partition coefficient (n-octanol/water): N.A./N.A.  
Auto-ignition temperature: N.A./N.A.  
Decomposition temperature: N.A./N.A.  
Viscosity: N.A./N.A.  
Explosive properties: N.A./N.A.  
Oxidizing properties: N.A./N.A.  
N.A./N.A. = Not Available/Not Applicable due to the nature of the product

### 9.2 Other information.

Pour point: Gris claro a gris metal polvo  
Blink: N.A./N.A.  
Kinematic viscosity: N.A./N.A.  
N.A./N.A. = Not Available/Not Applicable due to the nature of the product

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### SECTION 10: STABILITY AND REACTIVITY.

#### 10.1 Reactivity.

The product does not present hazards by their reactivity.

#### 10.2 Chemical stability.

Stable under the recommended handling and storage conditions (see section 7).

#### 10.3 Possibility of hazardous reactions.

The product does not present possibility of hazardous reactions.

#### 10.4 Conditions to avoid.

Avoid any improper handling.

#### 10.5 Incompatible materials.

Keep away from oxidising agents and from highly alkaline or acidic materials in order to prevent exothermic reactions.

#### 10.6 Hazardous decomposition products.

No decomposition if used for the intended uses.

### SECTION 11: TOXICOLOGICAL INFORMATION.

#### 11.1 Information on toxicological effects.

There are no tested data available on the product.

Repeated or prolonged contact with the product can cause the elimination of oil from the skin, giving rise to non-allergic contact dermatitis and absorption of the product through the skin.

Splatters in the eyes can cause irritation and reversible damage.

a) acute toxicity;

Not conclusive data for classification.

b) skin corrosion/irritation;

Not conclusive data for classification.

c) serious eye damage/irritation;

Not conclusive data for classification.

d) respiratory or skin sensitisation;

Not conclusive data for classification.

e) germ cell mutagenicity;

Not conclusive data for classification.

f) carcinogenicity;

Not conclusive data for classification.

g) reproductive toxicity;

Not conclusive data for classification.

h) STOT-single exposure;

Not conclusive data for classification.

i) STOT-repeated exposure;

Not conclusive data for classification.

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j) aspiration hazard;  
Not conclusive data for classification.

### SECTION 12: ECOLOGICAL INFORMATION.

#### 12.1 Toxicity.

There is no information available on the biodegradability of the substances present.

#### 12.2 Persistence and degradability.

There is no information available on the persistence and degradability of the product.

#### 12.3 Bioaccumulative potential.

No information is available regarding the bioaccumulation.

#### 12.4 Mobility in soil.

No information is available about the mobility in soil.  
The product must not be allowed to go into sewers or waterways.  
Prevent penetration into the ground.

#### 12.5 Results of PBT and vPvB assessment.

No information is available about the results of PBT and vPvB assessment of the product.

#### 12.6 Other adverse effects.

No information is available about other adverse effects for the environment.

### SECTION 13 DISPOSAL CONSIDERATIONS.

#### 13.1 Waste treatment methods.

Do not dump into sewers or waterways. Waste and empty containers must be handled and eliminated according to current, local/national legislation.  
Follow the provisions of Directive 2008/98/EC regarding waste management.

### SECTION 14: TRANSPORT INFORMATION.

Transportation is not dangerous. In case of road accident causing the product's spillage, proceed in accordance with point 6.

#### 14.1 UN number.

Transportation is not dangerous.

#### 14.2 UN proper shipping name.

Description:

ADR: Transportation is not dangerous.

IMDG: Transportation is not dangerous.

ICAO/IATA: Transportation is not dangerous.

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

Transportation is not dangerous.

#### 14.4 Packing group.

Transportation is not dangerous.

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### 14.5 Environmental hazards.

Transportation is not dangerous.

### 14.6 Special precautions for user.

Transportation is not dangerous.

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

Transportation is not dangerous.

## SECTION 15: REGULATORY INFORMATION.

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

The product is not affected by the Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer.

The product is not affected by Directive 2012/18/EU (SEVESO III).

The product is not affected by Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products.

The product is not affected by the procedure established Regulation (EU) No 649/2012, concerning the export and import of dangerous chemicals.

### 15.2 Chemical safety assessment.

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

## SECTION 16: OTHER INFORMATION.

Sections changed compared with the previous version:

7,10

It is recommended that the product only be employed for the purposes advised.

Abbreviations and acronyms used:

CEN: European Committee for Standardization.

DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum.

DNEL: Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.

PPE: Personal protection equipment.

Key literature references and sources for data:

<http://eur-lex.europa.eu/homepage.html>

<http://echa.europa.eu/>

Regulation (EU) 2015/830.

Regulation (EC) No 1907/2006.

Regulation (EU) No 1272/2008.

The information given in this Safety Data Sheet has been drafted in accordance with COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a 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.

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The information in this Safety Data Sheet on the Preparation is based on current knowledge and on current EC and national laws, as far as the working conditions of the users is beyond our knowledge and control. The product must not be used for purposes other than those that are specified without first having written instructions on how to handle. It is always the responsibility of the user to take the appropriate measures in order to comply with the requirements established by current legislation. The information contained in this Safety Sheet only states a description of the safety requirements for the preparation, and it must not be considered as a guarantee of its properties.