

## PRODUCT SAFETY DATA SHEET

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

#### 1.1. Product Identifiers

<b>Product Name:</b>	<b>Iron Powder</b>
<b>CAS-No.:</b>	7439-89-6
<b>EC No.:</b>	231-096-4
<b>Reach Registration Number</b>	01-2119462838-24-xxxx

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

Powder Metallurgy, Decorative Castings/Coatings, chemical reagent.  
There are no identified uses advised against

#### 1.3. Company/undertaking identification

Ronald Britton Ltd  
Regent Mill  
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OL12 0HQ  
United Kingdom

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Web: [www.ronaldbritton.co.uk](http://www.ronaldbritton.co.uk)

#### 1.4. Emergency Contact Information

+44 (0)1706 666620 (Office hours 0800 - 1630)  
+44 (0)7909 687472 or 681851 (Available 24Hrs).  
e-mail [ronaldbritton@colorlord.com](mailto:ronaldbritton@colorlord.com) Competent persons: Andrew Thompson, Paul Ives

### 2. HAZARDS IDENTIFICATION

#### 2.1. Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**  
Not classified

#### 2.2. Label elements

**Labeling according to Regulation (EC) No 1272/2008 [CLP]**  
Product does not require labelling

# Iron Powder SDS-RB24

## 2.3. Other hazards

The substance does not meet the criteria for PBT or vPvB substance.

Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

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## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Description of Material: Iron Powder

Chemical Composition:

Chemical name	EINECS N°	CAS N°	REACH Registration Number	Conc. (% w/w)	Classification according to Regulation (EC) No 1272/2008	Hazard statement
Iron	231-096-4	7439-89-6	01-2119462838-24-xxxx	>97%	-	-

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## 4. FIRST AID MEASURES

### 4.1 Description of First Aid Measures

General Advice: First aid followed by medical attention.

Inhalation: Move exposed person to fresh air. Keep warm and at rest. Seek medical attention as soon as possible.

Skin contact: Wash with mild soap and water. Generally the product does not irritate the skin. Seek medical advice if irritation occurs/persists.

Eye Contact: Rinse opened eye for several minutes under running water. Seek medical attention.

Ingestion: Wash mouth out with water, seek medical attention if symptoms occur.

### 4.2 Most Important Symptoms and effects, both acute and delayed

Inhalation: Main symptoms: Cough and shortness of breath. May cause irritation of respiratory tract.

Skin contact: Long term contact can cause irritation.

Eye Contact: May cause mechanical irritation.

Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

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

Treat Symptomatically

## 5. FIRE FIGHTING MEASURES

### 5.1 Suitable Extinguishing Media:

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Keep containers and surroundings cool with water spray. Confining and smothering metal fires is preferable rather than applying water. Use: Dry powder, dry chemical.

### Extinguishing Media not suitable for safety reasons:

Do not use a solid water stream as it may scatter and spread fire.

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

Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

### 5.3 Advice for firefighters:

Wear self contained breathing apparatus for fire fighting if necessary.

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## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions:

Wear protective equipment.  
Keep unprotected persons away.  
Avoid formation of dust

### 6.2 Environmental precautions:

Do not allow product to reach ground water, water bodies or sewerage system.

### 6.3 Methods for cleaning up:

Sweep up and shovel. Contain spillage, and then collect and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections:

See also sections 8 and 13

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## 7. HANDLING AND STORAGE

### 7.1 Precautions for Safe Handling:

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.  
Provide appropriate exhaust ventilation at places where dust is formed.

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

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

### 7.3 Specific end uses:

None

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control Parameters:

Chemical Name	Iron - 7439-89-6
Bulgaria	TWA: 6.0 mg/m <sup>3</sup>
Czech Republic	TWA: 10.0 mg/m <sup>3</sup>
Slovakia	TWA: 6.0 mg/m <sup>3</sup>

## Iron Powder SDS-RB24

Chemical Name	Iron oxide - 1309-37-1
Austria	STEL 10 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>
Belgium	TWA: 2 ppm TWA: 5 mg/m <sup>3</sup>
Bulgaria	TWA: 5.0 mg/m <sup>3</sup> TWA: 6.0 mg/m <sup>3</sup>
Croatia	TWA: 4 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup>
Czech Republic	TWA: 10.0 mg/m <sup>3</sup>
Denmark	TWA: 3.5 mg/m <sup>3</sup>
Estonia	TWA: 3.5 mg/m <sup>3</sup>
Finland	TWA: 5 mg/m <sup>3</sup>
France	TWA: 5 mg/m <sup>3</sup>
Greece	TWA 10 mg/m <sup>3</sup>
Hungary	TWA: 6 mg/m <sup>3</sup>
Ireland	TWA: 5 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup>
Norway	TWA: 3 mg/m <sup>3</sup> STEL: 6 mg/m <sup>3</sup>
Poland	STEL: 10 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>
Portugal	TWA: 5 mg/m <sup>3</sup>
Rumania	TWA: 5 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup>
Slovakia	TWA: 1.5 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup>
Spain	TWA: 5 mg/m <sup>3</sup>
Sweden	3.5 mg/m <sup>3</sup> NGV respirable dust
Switzerland	TWA: 3 mg/m <sup>3</sup>

Exposure Route of Relevance	Long term, local effects workers	Long term, systemic effects workers	Short term, local effects workers	Short term, systemic effects workers	Long term, local effects consumer	Long term, systemic effects consumer	Short term, local effects consumer	Short term, systemic effects consumer
Human oral						0,71 mg/kg bw/day		
Human inhalation	3 mg/m <sup>3</sup>				1,5 mg/m <sup>3</sup>			

### 8.2 Exposure Controls:

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal Protective equipment

**Eye/face protection** Use goggles in case of dusty atmosphere.

**Skin protection** Handle with gloves. Use of canvass gloves is advisable.

**Body Protection** Long sleeved clothing.

**Respiratory protection** During handling dust is generated; and if ventilation is inadequate the use of a half-mask with filter P3 shall be worn if exposure limit value is suspected to be exceeded or the dust is perceived disturbing.

# Iron Powder SDS-RB24

**Thermal hazards** The product does not represent a thermal hazard, thus special consideration is not required.

**Environmental Exposure Controls** Dust from exhaust ventilation should be separated out in order to avoid release to the natural environment.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

a) Appearance:	Gray coloured powder
b) Odour:	odourless
c) Odour threshold	no data available
d) pH	no data available
e) Melting point/freezing point	1538°C
f) Initial boiling point and boiling range	2861°C
g) Flash point	no data available
h) Evaporation rate	no data available
i) Flammability (solid, gas)	not flammable (according to method A10, EU-Regulation 440/2008)
j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	Not applicable (solid with melting point >300°C)
l) Vapour density	no data available
m) Relative density	7.87 g/cm <sup>3</sup> at 20°C
n) Specific Weight	no data available
o) Water solubility	0.015 mg/l at 22°C
p) Partition coefficient: n octanol/water	no data available
q) Autoignition temperature	No autoignition
r) Decomposition temperature	will not decompose
s) Viscosity	no data available
t) Explosive properties	non explosive
u) Oxidizing properties	not oxidising

### 9.2 Other Safety Information

<b>VOC Content (%)</b>	Not applicable
<b>Bulk Density</b>	2.0 -3.0 g/cm <sup>3</sup>
<b>Fines fraction</b>	5-30% <45um
<b>Dust explosion class</b>	St 1

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## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

Stable under normal conditions

### 10.2 Chemical stability

Stable under normal handling and storage conditions

### 10.3 Possibility of hazardous reactions

None under normal processing conditions

### 10.4 Conditions to avoid

Avoid generating dust; fine dust in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

### 10.5 Incompatible materials

Strong oxidizing agents and strong acids

### 10.6 Hazardous decomposition products

The product will not decompose.

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

The principal risk to human health presented by "iron" dust is related to the concentration of dust in the air acting as a nuisance dust. The higher the concentration of dust the greater the risk of irritation to the respiratory system and mechanical irritation to the eyes.

#### Acute toxicity

The substance is not toxic for skin, inhalation or ingestion.

#### Skin corrosion/irritation

Not irritating.

#### Serious eye damage/eye irritation

OECD 405: Not irritating.

#### Respiratory or skin sensitization

Not sensitizing.

#### Germ cell mutagenicity

Ames test OECD 471 negative.

#### Carcinogenicity

Not classified according to the criteria of the Globally Harmonized System (GHS)

#### Reproductive toxicity

Testing of metallic iron for reproductive toxicity is not appropriate due to a lack of systemic exposure.

#### Specific target organ toxicity - single exposure

Not classified according to the criteria of the Globally Harmonized System (GHS)

#### Specific target organ toxicity - repeated exposure

Not classified according to the criteria of the Globally Harmonized System (GHS)

#### Aspiration hazard

Not classified according to the criteria of the Globally Harmonized System (GHS)

#### Additional Information

LD50 Oral 7500 mg/kg bw (Rat)

LD50 Dermal -

LD50 Inhalation -

**12. ECOLOGICAL INFORMATION**

**12.1 Toxicity**

**Ecotoxicity effects**

Contains forms of iron which are highly insoluble and non-hazardous

**Toxicity to Fish**

LC50 96h = 13.6 mg/L (Morone saxatilis – static)

LC50 96h = 0.56 mg/L (Cyprinus Carpio – semi-static)

**12.2 Persistence and degradability**

no data available.

**12.3 Bio-accumulative potential**

Iron and its compounds are essential compounds. Iron is an essential trace element, well-regulated in all living organisms. The available evidence shows the absence of iron biomagnification across the trophic chain both in the aquatic and terrestrial food chains. The existing information suggests not only that iron does not biomagnify, but rather that it tends to exhibit biodilution.

**12.4 Mobility in soil**

Iron and its compounds are found in the form of hydroxides in the environment. They are stabilized in the form of oxides in the long term.

**12.5 Results of PBT and vPvB assessment**

As iron is not bio-available, owing to its extreme insolubility in water, it is not systematically available or bio-accumulative, and hence it does not fulfill either of the PBT or vPvB criteria for classification.

**12.6 Other adverse effects**

None anticipated.

**13. DISPOSAL CONSIDERATIONS**

**Product:** This product is not classified as hazardous waste according to directive 2008/98/EC and national or regional provisions. Remove in accordance with local official regulations.

**Used packaging material:** Containers may be recycled or re-used. Observe local/state/federal regulations.

**14. TRANSPORT INFORMATION:**

	ADR/RID	IMDG	IATA
14.1 UN number	-	-	-
14.2 UN Proper shipping name	Not dangerous Goods	Not dangerous Goods	Not dangerous Goods
14.3 Transport Hazard Class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental Hazards	no	Marine pollutant: No	no

## Iron Powder SDS-RB24

14.6 Special Precautions for user	No data available	No data available	No data available
14.7 Transport in Bulk according to Annex II of Marpol73/78 and the IBC code	Not applicable	Not applicable	Not applicable
14.8 Labelling	none		

### 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**  
No data available

**15.2 Chemical Safety Assessment**

A Chemical Safety Assessment has been carried out for this product

### 16. OTHER INFORMATION

Products covered by this data sheet include:

Iron Powder - 100#  
Iron Powder - 300#  
Iron Powder Nutrafine RS  
Iron Powder RB95  
(This list is not exhaustive)

Issue Date : 01 May 2018  
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Safety Data Sheet N<sup>o</sup>. : RB24

#### Laws and References

- Directive 2004/74/EC
- Regulation EC n. 1907/2006 (REACH)
- Regulation EC n. 2172/2008 (CLP)
- Regulation EC n. 790/2009
- Regulation EC n. 453/2010
- ADR (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG Code (International Maritime Dangerous Goods Code).
- IATA (International Air Transport Association).
- SAX'S, (Dangerous Properties of Industrial Materials)
- ACGIH (2009) American Conference of Governmental Industrial Hygienists

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