

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date

20.04.2010

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

### Product Information

Catalogue No.: 103819  
Product name: Iron GR for analysis reduced, particle size 10 µm  
Use of the Substance/Mixture: Reagent for analysis, Chemical production  
Company: Merck KGaA \* 64271 Darmstadt \* Germany \* Phone:+49 6151 72-0  
Emergency telephone: Please contact the regional Merck representation in your country.  
Responsible/issuing person: EQ-EPS \* e-mail: prodsafe@merck.de

## 2. Hazards identification

### GHS Classification

Flammable solid, Category 3 H228: Flammable solid.

### EC Classification

F; R11

For the full text of the R-phrases mentioned in this Section, see Section 16.

## 3. Composition/information on ingredients

Formula	Fe	Fe (Hill)
CAS-No.	7439-89-6	
EC-No.	231-096-4	
Molar mass	55,85 g/mol	

## 4. First aid measures

After inhalation: fresh air.

After skin contact: wash off with plenty of water. Remove contaminated clothing.

After eye contact: rinse out with plenty of water.

After swallowing: make victim drink water (two glasses at the most). Consult doctor if feeling unwell.

## 5. Fire-fighting measures

### *Suitable extinguishing media*

Special powder against metal fire, Sand

### *Unsuitable extinguishing media*

Water, Foam

### *Specific hazards during fire fighting*

Combustible material

Risk of dust explosion.

Caution! in contact with water product releases:

Hydrogen

Safety Data Sheet  
according to Regulation (EC) No. 1907/2006

Catalogue No.: 103819  
Product name: Iron GR for analysis reduced, particle size 10 µm

---

Potential for spontaneous combustion.

*Special protective equipment for fire-fighters*

In the event of fire, wear self-contained breathing apparatus.

---

## 6. Accidental release measures

*Personal precautions*

Avoid substance contact. Avoid inhalation of dusts. Ensure adequate ventilation.

*Environmental precautions*

Do not let product enter drains. Explosive properties

*Methods for cleaning up*

Take up dry. Forward for disposal. Clean up affected area. Avoid generation of dusts.

---

## 7. Handling and storage

### Handling

*Advice on safe handling*

Observe label precautions.

*Advice on protection against fire and explosion*

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

### Storage

*Further information on storage conditions*

Keep under nitrogen. Dry. Tightly closed. Keep away from heat and sources of ignition.

Without limitations.

---

## 8. Exposure controls/personal protection

### Personal protective equipment

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

*Respiratory protection*

required when dusts are generated.

Recommended Filter type: Filter P 1 (acc. to DIN 3181) for solid particles of inert substances

*Hand protection*

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the resultant standard EN374, for example, KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

---

Safety Data Sheet  
according to Regulation (EC) No. 1907/2006

Catalogue No.: 103819  
Product name: Iron GR for analysis reduced, particle size 10 µm

---

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

*Eye protection*

Safety glasses

*Protective measures*

Protective suit

*Hygiene measures*

Change contaminated clothing. Wash hands after working with substance.

---

## 9. Physical and chemical properties

Form	solid
Colour	grey
Odour	odourless
pH	7 - 9
Viscosity, dynamic	no data available
Melting point	1.535 °C
Boiling point/boiling range	3.000 °C at 1.013 hPa
Ignition temperature	> 100 °C
Flash point	no data available
Oxidizing properties	no data available
Flammability	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Relative vapour density	no data available
Density	7,87 g/cm <sup>3</sup> at 20 °C
Bulk density	3.000 - 4.000 kg/m <sup>3</sup>
Solubility/qualitative	no data available

Safety Data Sheet  
according to Regulation (EC) No. 1907/2006

Catalogue No.: 103819  
Product name: Iron GR for analysis reduced, particle size 10 µm

---

Water solubility	at 20 °C insoluble
Particle size	Particle size < 10 µm
Partition coefficient: n- octanol/water	no data available
Evaporation rate	no data available

---

## 10. Stability and reactivity

### *Conditions to avoid*

Heating. Exposure to moisture.

### *Materials to avoid*

Violent reactions possible with:

ammonium compounds, Oxidizing agents, halogens, halogen-halogen compounds, nitril compounds, nitrates, Fluorine, oils, hydrogen peroxide, hydrogen sulfide

Acetaldehyde, polymerisation

Generates dangerous gases or fumes in contact with:

acids, Water

### *Hazardous decomposition products*

no information available

### *Further information*

Risk of dust explosion.

---

## 11. Toxicological information

### *Acute oral toxicity*

LD50 rat

Dose: 30.000 mg/kg

(RTECS)

Symptoms: Nausea, Vomiting, Diarrhoea

### *Acute inhalation toxicity*

Symptoms: Possible damages:, May cause irritation of respiratory tract.

### *Eye irritation*

slight irritation

### *Genotoxicity in vitro*

Ames test

Result: negative

(Lit.)

### *Further information*

Systemic effects:

After absorption of large quantities:

change in weight, Cardiac irregularities, drop in blood pressure

Further data:

Handle in accordance with good industrial hygiene and safety practice.

---

Safety Data Sheet  
according to Regulation (EC) No. 1907/2006

Catalogue No.: 103819  
Product name: Iron GR for analysis reduced, particle size 10 µm

---

However, when the product is handled appropriately, hazardous effects are unlikely to occur.

---

## 12. Ecological information

### *Additional ecological information*

We have no quantitative data concerning the ecological effects of this product.

Further information on ecology

No ecological problems are to be expected when the product is handled and used with due care and attention.

---

## 13. Disposal considerations

### *Product*

Chemicals must be disposed of in compliance with the respective national regulations. Under [www.retrologistik.de](http://www.retrologistik.de) you will find country- and substance-specific information as well as contact partners.

### *Packaging*

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under [www.retrologistik.de](http://www.retrologistik.de) you will find special information on the respective national conditions as well as contact partners.

---

## 14. Transport information

### **ADR/RID**

UN 3089 METAL POWDER, FLAMMABLE, N.O.S. (IRON POWDER), 4.1, III

### **IATA**

UN 3089 METAL POWDER, FLAMMABLE, N.O.S., 4.1, III

### **IMDG**

UN 3089 METAL POWDER, FLAMMABLE, N.O.S., 4.1, III

EmS F-G S-G

The transport regulations re cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.

---

## 15. Regulatory information

### **GHS-Labeling**

#### *Hazard pictograms*



#### *Signal word*

Warning

#### *Hazard statements*

H228: Flammable solid.

#### *Precautionary statements*

P370 + P378: In case of fire: Use metal fire powder for extinction.

---

Safety Data Sheet  
according to Regulation (EC) No. 1907/2006

Catalogue No.: 103819  
Product name: Iron GR for analysis reduced, particle size 10 µm

---

**Reduced labelling (≤125 ml)**

*Hazard pictograms*



*Signal word*  
Warning

*Precautionary statements*

P370 + P378: In case of fire: Use metal fire powder for extinction.

CAS-No. 7439-89-6

**Labelling according to EC Directives**

Symbol(s): F Highly flammable

R-phrase(s): 11 Highly flammable.

EC-No. 231-096-4

**Reduced labelling (≤125 ml)**

Symbol(s): F Highly flammable

**National legislation**

Storage class VCI: 4.1B Flammable solids

Major Accident Hazard 96/82/EC Update: 2003  
Legislation: Directive 96/82/EC does not apply

Other regulations: Take note of Dir 94/33/EC on the protection of young people at work.

---

**16. Other information**

**Full text of R-phrases referred to under sections 2 and 3**

R11 Highly flammable.

Regional representation: This information is given on the authorised Safety Data Sheet for your country.

---

*The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.*