

# Safety Data Sheet

According to regulation (EC) No. 1907/2006 (REACH)



## 54650 Steel Powder

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Version: 4

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### 1. Identification of the Substance/Mixture and of the Company/Undertaking

#### 1.1. Product Identifier

*Product Name:* Steel Powder

*Article No.:* 54650

*UFI:* --

#### 1.2. Relevant identified Uses of the Substance or Mixture and Uses advised against

*Identified uses:*  
Melting, for powder-metallurgy usage, cutting, ect.

*Uses advised against:*

#### 1.3. Details of the Supplier of the Safety Data Sheet (Producer/Importer)

*Company:* Kremer Pigmente GmbH & Co. KG

*Address:* Hauptstr. 41-47, 88317 Aichstetten, Germany

*Tel./Fax.:* Tel +49 7565 914480, Fax +49 7565 1606

*Internet:* www.kremer-pigmente.com

*E-Mail:* info@kremer-pigmente.com

*Importer:* --

#### 1.4. Emergency No.

*Emergency No.:* +49 7565 914480 (Mon-Fri 8:00 - 17:00)

#### 1.4.2 Poison Center:

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### 2. Hazards Identification

#### 2.1. Classification of the Substance or Mixture

*Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)*

*This product does not require classification and labelling as hazardous according to CLP/GHS.*

*Possible Environmental Effects:*  
See Section 12.

#### 2.2. Label Elements

*Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)*

*This product does not require classification and labelling as hazardous according to CLP/GHS.*

*Hazard designation:*  
Not applicable.

*Signal word:*

*Hazard designation:*

*Safety designation:*

*Hazardous components for labelling:*

#### 2.3. Other Hazards

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### Composition/Information on Ingredients

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### 3.

#### 3.1. Substance

#### 3.2. Mixture

*Chemical Characterization:*

*Information on Components / Hazardous Ingredients:*

Iron; REACH Reg. No. 01-2119462838-24-xxxx	> 97 %	CAS-Nr: 7439-89-6
		EINECS-Nr: 231-096-4
		EC-Nr:

*Additional information:*

### 4. First Aid Measures

#### 4.1. Description of the First Aid Measures

*General information:*

*Seek medical attention in case of complaints.*

*After inhalation:*

*Take affected person to fresh air.*

*If breathing is difficult call a physician.*

*After skin contact:*

*Remove contaminated clothing. Wash off immediately with plenty of water and soap.*

*After eye contact:*

*Rinse open eyes with plenty of water for at least 15 minutes.*

*Seek medical attention if irritation persists.*

*After ingestion:*

*Drink 1 - 2 glasses of water. Seek medical attention immediately.*

*If possible, give afterwards milk to drink.*

#### 4.2. Most important Symptoms and Effects, both Acute and Delayed

*Symptoms:*

*Inhalation: coughing, shortness of breath. Irritating to respiratory system.*

*Skin contact: prolonged contact may cause irritations.*

*Eye contact: can cause mechanical irritation.*

*Swallowing: may cause stomach irritation, nausea, vomiting and diarrhea.*

*Effects:*

*No further information available.*

#### 4.3. Indication of any Immediate Medical Attention and special Treatment needed

*Treatment:*

*Treat symptomatically.*

### 5. Fire-Fighting Measures

#### 5.1. Extinguishing Media

*Suitable extinguishing media:*

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*Use extinguishing media for surrounding fire.  
Extinguishing powder.*

*Unsuitable extinguishing media:*

*Molten metal can react violently with water. Avoid that molten iron flows into water or water into molten iron. Should water be surrounded by molten iron, this could cause a vigorous release of vapor and gases. DO NOT APPLY WATER, CO2 OR FOAM DIRECTLY ONTO THE MATERIAL ITSELF.*

### 5.2. Special Hazards arising from the Substance or Mixture

*Special hazards:*

*The product is not flammable.  
Danger of dust explosion caused by very finely suspended dust particles in the air. In the case of this product this is rather improbable due to its particle size.*

### 5.3. Advice for Firefighters

*Protective equipment:*

*Wear self-contained respiratory protective device and full protective gear.*

*Further information:*

*Cool exposed containers with water mist.*

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## 6. Accidental Release Measures

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

*Personal precautions:*

*Avoid formation of dust, wear protective clothing.*

### 6.2. Environmental Precautions

*Environmental precautions:*

*Prevent contamination of soils, drains and surface water.*

### 6.3. Methods and Material for Containment and Cleaning Up

*Methods and material:*

*Avoid dust formation.  
Spillage should be cleared with vacuum equipment, protected against static electricity.*

### 6.4. Reference to other Sections

*Protective clothing, see Section 8.  
See Section 13 for information on disposal.*

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## 7. Handling and Storage

### 7.1. Precautions for Safe Handling

*Instructions on safe handling:*

*Avoid formation of dust.  
Provide adequate ventilation.*

*Hygienic measures:*

*Avoid contact with skin, eyes and clothing. Do not inhale dust.  
Take off contaminated clothing immediately. Store working clothing separately.*

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*Keep away from foodstuffs and drinks. Do not eat, drink or smoke during work. Wash hands before breaks and at the end of work.*

### 7.2. Conditions for Safe Storage, including any Incompatibilities

*Storage conditions:*

*Store in tightly sealed containers in a dry location to avoid the oxidation of the material.*

*Requirements for storage areas and containers:*

*Store product in closed containers.*

*Information on fire and explosion protection:*

*Take measures to prevent electrostatic discharge.*

*Self-ignition resp. auto-oxidation is possible.*

*Dust explosion class 1 (Kst-value > 0 - 200 bar m/s).*

*Do not store together with: strong oxidants and acids.*

*Storage class:*

*Further Information:*

### 7.3. Specific End Use(s)

*Further information:*

*No information available.*

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## 8. Exposure Controls/Personal Protection

### 8.1. Parameters to be Controlled

*Parameters to be controlled (DE):*

*Parameters to be controlled:*

*Iron (CAS 7439-89-6), (BG, SK, TWA): 6 mg/m<sup>3</sup>*

*Iron (CAS 7439-89-6), (CZ, TWA): 10 mg/m<sup>3</sup>*

*Derived No-Effect Level (DNEL):*

*Iron (7439-89-6):*

*0.71 mg/kg bw/day (consumer, swallowing, long-term exposure - systemic effects)*

*3 mg/m<sup>3</sup> (worker, inhalation, long-term exposure - local effects)*

*1.5 mg/m<sup>3</sup> (consumer, inhalation, short-term exposure)*

*Predicted No-Effect Concentration (PNEC):*

*Additional Information:*

### 8.2. Exposure Controls

*Technical protective measures:*

*Provide adequate ventilation.*

*Personal Protection*

*General protective measures:*

*Keep away from foodstuffs and drinks. Do not eat, drink or smoke during work. Wash hands before breaks and at the end of work.*

*Respiratory protection:*

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*Dust mask recommended when very dusty (with particle filter P3).*

*Hand protection:*

*Not required*

*Protective glove material:*

*For long-term exposure: nitrile or butyl rubber (BTT>480 min, 0.7 mm).*

*Eye protection:*

*Not required.*

*Body protection:*

*Protective clothing.*

*Environmental precautions:*

*Remove dust from the ventilation to avoid the release to air.*

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## 9. Physical and Chemical Properties

### 9.1. Information on Basic Physical and Chemical Properties

<i>Form:</i>	<i>powder</i>
<i>Color:</i>	<i>gray</i>
<i>Odor:</i>	<i>odorless</i>
<i>Odor threshold:</i>	<i>no information available</i>
<i>pH-Value:</i>	<i>not available</i>
<i>Melting temperature:</i>	<i>1535°C (1013 hPa)</i>
<i>Boiling temperature:</i>	<i>2861°C (1013 hPa)</i>
<i>Flash point:</i>	<i>not applicable</i>
<i>Evaporation rate:</i>	<i>not applicable</i>
<i>Flammability (solid, gas):</i>	<i>not flammable</i>
<i>Upper explosion limit:</i>	<i>no information available</i>
<i>Lower explosion limit:</i>	<i>no information available</i>
<i>Vapor pressure:</i>	<i>not applicable</i>
<i>Vapor density:</i>	<i>No information available.</i>
<i>Density:</i>	<i>7.87 g/cm<sup>3</sup> (20°C)</i>
<i>Solubility in water:</i>	<i>insoluble</i>

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*Coefficient of variation (n-Octanol/Water):*

*not applicable*

*Auto-ignition temperature:*

*not applicable*

*Decomposition temperature:*

*No decomposition if used according to specifications.*

*Viscosity, dynamic:*

*not applicable*

*Explosive properties:*

*Product does not present an explosion hazard.*

*Oxidizing properties:*

*none*

*Bulk density:*

*2.0 - 3.0 g/cm<sup>3</sup>*

### 9.2. Further Information

*Solubility in solvents:*

*Viscosity, kinematic:*

*Burning class:*

*Solvent content:*

*Solid content:*

*Particle size:*

*< 45 µm*

*Other information:*

*No further information.*

## 10. Stability and Reactivity

### 10.1. Reactivity

*Stable if used according to specifications.*

### 10.2. Chemical Stability

*Stable if used according to specifications.*

### 10.3. Possibility of Hazardous Reactions

*None if used according to specifications.*

### 10.4. Conditions to Avoid

*Conditions to avoid:*

*Avoid formation of dust.*

*Accumulation of fine dust presents a potential risk of dust explosion and if a ignition source is present.*

*Thermal decomposition:*

*No further information available.*

### 10.5. Incompatible Materials

*Strong oxidizing agents.*

*Strong acids.*

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### 10.6. Hazardous Decomposition Products

*The product does not decompose.*

### 10.7. Further Information

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## 11. Toxicological Information

### 11.1. Information on Toxicological Effects

*Acute Toxicity*

*Product is not toxic.*

*LD50, oral:*

*Iron: 7500 mg/kg bw (rat)*

*LD50, dermal:*

*LC50, inhalation:*

*Primary effects*

*Irritant effect on skin:*

*Continuous contact can cause irritation.*

*Irritant effect on eyes:*

*Dust may irritate eyes.*

*Inhalation:*

*Can cause irritation of the respiratory system.*

*Ingestion:*

*May cause indisposition and vomiting.*

*Sensitization:*

*Non sensitizing.*

*Mutagenicity:*

*Not mutagenic (Ames-Test; OECD 471)*

*Reproductive toxicity:*

*No information available.*

*Carcinogenicity:*

*No relevant data found.*

*Teratogenicity:*

*No information available.*

*Specific target organ toxicity (STOT):*

*No relevant data found.*

*Additional toxicological information:*

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## 12. Ecological Information

### 12.1. Aquatic Toxicity

*Fish toxicity:*

*Iron: LC50: 0.56 mg/l (96h; Cyprinus carpio semi-static); 13.6 mg/l (96h; Morone saxatillis static)*

*Daphnia toxicity:*

*No information available.*

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*Bacteria toxicity:*

*no information available*

*Algae toxicity:*

*Iron: ErC50: 4.9 mg/l (72h)*

### 12.2. Persistency and Degradability

*Methods for the evaluation of the biological degradability are not applicable for inorganic substances.*

### 12.3. Bioaccumulation

*No bioaccumulation.*

### 12.4. Mobility

*Iron and its compounds are found in the environment in the form of hydroxides. In the form of oxides they have a long-term stability.*

### 12.5. Results of PBT- und vPvP Assessment

*This substance is not classified as PBT (persistent, bioaccumulative, toxic), nor as vPvB (very persistent, very bioaccumulative).*

### 12.6. Other Adverse Effects

*Water hazard class:*

*Behaviour in sewage systems:*

*Further ecological effects:*

*No ecological problems expected.*

*AOX Value:*

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## 13. Disposal Considerations

### 13.1. Waste Treatment Methods

*Product:*

*Dispose of according to official national and local regulations.*

*European Waste Code (EWC):*

*Uncleaned packaging:*

*Dispose of according to official local regulations.*

*Waste Code No.:*

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## 14. Transport Information

### 14.1. UN Number

*ADR, IMDG, IATA*

### 14.2. UN Proper Shipping Name

*ADR/RID:*

*No hazardous goods according to ADR / DOT (US) (land transportation).*

*IMDG/IATA:*

*Not hazardous goods*

### 14.3. Transport Hazard Classes

*ADR Class:*

*not applicable*

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*Hazard no.:*

*Classification code:*

*Tunnel restriction code:*

*IMDG Class (sea):*

*Hazard no.:*

*EmS No.:*

*IATA Class:*

*not applicable*

*Hazard no.:*

### 14.4. Packaging Group

*ADR/RID:*

*not applicable*

*IMDG:*

*IATA:*

### 14.5. Environmental Hazards

*None*

### 14.6. Special Precautions for User

*none known*

### 14.7. Transportation in Bulk according to Annex II of MARPOL 73/78 and IBC-Code

*not applicable*

### 14.8. Further Information

*Not classified as a dangerous good under transport regulations.*

## 15. Regulatory Information

### 15.1. Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

*Water hazard class:*

*0, not hazardous (German Regulation; Self-assessment)*

*Local regulations on chemical accidents:*

*Employment restrictions:*

*Restriction and prohibition of application:*

*Technical instructions on air quality:*

### 15.2. Chemical Safety Assessment

*A Chemical Safety Assessment has been carried out for this product.*

### 15.3. Further Information

*Listed in the following inventories:*

*EINECS (EU), TSCA (US), AICS (AUS), DSL/NDL (CA), KECL (KR), PICCS (PH), IECSC (CN)*

*This product is not a SEVESO substance, not a ozone-depleting substance and not a persistent organic pollutant (POP).*

## 16. Other Information

*This product should be stored, handled and used in accordance with the next page.*

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*with good hygiene practices and in conformity with any legal regulations. This information contained herein is based on the present state of knowledge and is intended to describe our product from the point of view of safety requirements. It should be therefore not be construed as guaranteeing specific properties.*