

SAFETY DATA SHEET

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Trade name: Iron Oxide Black

Print date: 03.11.23

Version: 8 / DE

Date revised: 16.06.2023

Replaces Version: 7 / DE

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Iron Oxide Black

Registration no.

EC No.: 215-277-5
Registration no. 01-2119457646-28-XXXX
CAS No. 1317-61-9

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

Use of the substance/preparation

Colourant

1.3. Details of the supplier of the safety data sheet

Address

Deffner & Johann GmbH
Mühlackerstraße 13
D-97520 Röthlein
Telefon-Nr.: + 49 (0) 9723 9350-0
Fax-Nr.: + 49 (0) 9723 9350-25
E-Mail-Adresse: info@deffner-johann.de

1.4. Emergency telephone number

+49 (0) 9723 9350-0 (Mo - Fr: 7.30 - 15.00 Uhr)

SECTION 2: Hazards identification ***

2.1. Classification of the substance or mixture

Voluntary product information following the Safety Data Sheet format
This product is not classified hazardous in accordance with Regulation (EC) No 1272/2008.

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

The product does not require a hazard warning label in accordance with Regulation (EC) No 1272/2008.

2.3. Other hazards

Dust loading

This substance/mixture does not contain components classified as persistent, bioaccumulative and toxic (PBT) at levels of 0.1% or higher. This substance/mixture does not contain components classified as very persistent and very bioaccumulative (vPvB) at concentrations of 0.1% or higher. The substance/mixture does not contain components considered to have endocrine disrupting properties for humans according to REACH Article 57(f) or Regulation (EU) 2017/2100 or Regulation (EU) 2018/605 at levels of 0.1% or higher. The substance/mixture does not contain components considered to have endocrine disrupting properties to non-target organisms according to REACH Article 57(f) or Regulation (EU) 2017/2100 or Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical characterization

Triiron tetraoxide; Fe₃O₄

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In case of persistent symptoms consult doctor.

After inhalation

Trade name: Iron Oxide Black

Print date: 03.11.23

Version: 8 / DE

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Replaces Version: 7 / DE

Remove the casualty into fresh air and keep him calm. In the event of symptoms take medical treatment.

After skin contact

Wash off immediately with soap and water. Consult a doctor if skin irritation persists.

After eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.

After ingestion

Rinse mouth thoroughly with water. Call in a physician immediately and show him the Safety Data Sheet.

Adhere to personal protective measures when giving first aid

First aider: Pay attention to self-protection!

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

Until now no symptoms known so far.

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

Hints for the physician / treatment

Treat symptomatically

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water spray jet, Foam, Carbon dioxide

Non suitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

None known

5.3. Advice for firefighters

Special protective equipment for fire-fighting

Use self-contained breathing apparatus. Wear full protective suit.

Other information

Fire residues and contaminated fire-fighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Do not inhale dust. Use breathing apparatus if exposed to vapours/dust/aerosol. Ensure adequate ventilation. Use personal protective clothing. High risk of slipping due to leakage/spillage of product. Refer to protective measures listed in Sections 7 and 8. Remove persons to safety.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil. Retain and dispose of contaminated wash water.

6.3. Methods and material for containment and cleaning up

Avoid raising dust. Pick up mechanically. When picked up, treat material as prescribed under Section 13 "Disposal".

6.4. Reference to other sections

Information regarding Safe handling, see Section 7. Information regarding personal protective measures, see Section 8. Information regarding waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid the formation and deposition of dust. Provide exhaust ventilation if dust is formed. Ensure adequate ventilation. Handle and open container with care. Provide suitable exhaust ventilation at the processing machines. Use breathing apparatus when transferring large quantities without exhaust ventilation facilities. If workplace limits are exceeded, a respiratory protection approved for this particular job must be worn. Observe the usual precautions for handling chemicals.

Trade name: Iron Oxide Black

Print date: 03.11.23

Version: 8 / DE

Date revised: 16.06.2023

Replaces Version: 7 / DE

Advice on protection against fire and explosion

No special measures required.

7.2. Conditions for safe storage, including any incompatibilities

Hints on storage assembly

Do not store together with foodstuffs.

Storage class according to TRGS 510

Storage class according to TRGS 13 Non- combustible solids
510

Further information on storage conditions

Keep container tightly closed and dry in a cool, well-ventilated place. Protect from direct sunlight. Protect from extreme heat and cold.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Other information

The national general dust limit must be observed.
TRGS 900: Observe the general dust threshold.

Derived No/Minimal Effect Levels (DNEL/DMEL)

| | | |
|----------------------|--------------------------------|-------------------|
| Type of value | Derived No Effect Level (DNEL) | |
| Reference group | Worker | |
| Duration of exposure | Long term | |
| Route of exposure | inhalative | |
| Mode of action | Local effects | |
| Concentration | 10 | mg/m ³ |
| Source | Manufacturer's data | |

8.2. Exposure controls

General protective and hygiene measures

Do not inhale dust/fumes/aerosols. Avoid contact with skin and eyes. Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Wash hands before breaks and after work. Use barrier skin cream. Observe the usual precautions for handling chemicals. Take off immediately all contaminated clothing.

Respiratory protection

If workplace limits are exceeded, a respiratory protection approved for this particular job must be worn. Particle filter P2; Use breathing apparatus in dust-laden atmosphere.

Hand protection

Protective gloves
Observe the information of the glove manufacturers on permeability and breakthrough times and other workplace requirements.

Eye protection

Safety glasses with side protection shield

Body protection

Clothing as usual in the chemical industry.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | | |
|---|---------------------|----|
| Physical state | Powder | |
| Colour | black | |
| Odour | odourless | |
| Melting point | | |
| Value | > 1000 | °C |
| Source | Manufacturer's data | |
| Freezing point | | |
| Remarks | not determined | |
| Boiling point or initial boiling point and boiling range | | |
| Remarks | not determined | |
| Flammability | | |

Trade name: Iron Oxide Black

Print date: 03.11.23

Version: 8 / DE

Date revised: 16.06.2023

Replaces Version: 7 / DE

not determined

Upper and lower explosive limits

Remarks not determined

Flash point

Remarks Not applicable

Ignition temperature

Remarks not determined

Decomposition temperature

Remarks not determined

pH value

Value 5 to 8

Concentration/H₂O 5 %

Remarks Suspension in water

Source Manufacturer's data

Solubility(ies)

Remarks not determined

Partition coefficient n-octanol/water (log value)

Remarks not determined

Vapour pressure

Remarks No data available

Density and/or relative density

Value 4,7 kg/l

Temperature 20 °C

Source Manufacturer's data

Relative vapour density

Remarks not determined

Particle characteristics

Remarks not determined

9.2. Other information**Odour threshold**

Remarks not determined

Evaporation rate (ether = 1) :

Remarks not determined

Solubility in water

Remarks insoluble

Source Manufacturer's data

Explosive properties

evaluation not determined

Oxidising properties

Remarks not determined

Other information

None known

SECTION 10: Stability and reactivity**10.1. Reactivity**

No hazardous reactions when stored and handled according to prescribed instructions.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

When used as recommended, no hazardous reactions are expected.

10.4. Conditions to avoid

At temperatures above 80 °C the product may become unstable and oxidise. This generates additional heat which, under unfavourable conditions, may result in the combustion of flammable materials. Avoid all sources of ignition: heat, sparks, open flame.

Decomposition temperature

Trade name: Iron Oxide Black

Print date: 03.11.23

Version: 8 / DE

Date revised: 16.06.2023

Replaces Version: 7 / DE

Remarks not determined

10.5. Incompatible materials

No hazardous reactions when stored and handled according to prescribed instructions.

10.6. Hazardous decomposition products

No dangerous decomposition products if the regulations / instructions for storage and handling are observed.

SECTION 11: Toxicological information ***

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

Acute oral toxicity

Species rat
 LD50 > 5000 mg/kg
 Source Manufacturer's data
 Remarks Based on available data, the classification criteria are not met.

Acute dermal toxicity

Remarks Based on available data, the classification criteria are not met.

Acute inhalational toxicity ***

Remarks Based on available data, the classification criteria are not met.

Skin corrosion/irritation

evaluation non-irritant
 Remarks Test conducted with a similar formulation.
 Source Manufacturer's data
 Remarks Based on available data, the classification criteria are not met.

Serious eye damage/irritation

evaluation non-irritant
 Remarks Test conducted with a similar formulation.
 Source Manufacturer's data
 Remarks Based on available data, the classification criteria are not met.

Sensitization

Remarks Based on available data, the classification criteria are not met.

Subacute, subchronic, chronic toxicity ***

Remarks not determined
 Remarks Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
 Remarks Frequent persistent contact with the skin can cause skin irritation.
 Remarks Like any foreign body, particles (dust) can cause mechanical irritation.

Mutagenicity

Remarks Based on available data, the classification criteria are not met.

Reproductive toxicity

Remarks Based on available data, the classification criteria are not met.

Carcinogenicity

Remarks Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity (STOT)

Single exposure

Remarks Based on available data, the classification criteria are not met.

Repeated exposure

Remarks Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

11.2 Information on other hazards

Endocrine disrupting properties with respect to humans

The substance/mixture does not contain components considered to have endocrine disrupting properties for humans according to REACH Article 57(f) or Regulation (EU) 2017/2100 or Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: Ecological information

12.1. Toxicity

Trade name: Iron Oxide Black

Print date: 03.11.23

Version: 8 / DE

Date revised: 16.06.2023

Replaces Version: 7 / DE

General information

Entry into the environment is to be avoided.

Fish toxicity

| | | |
|----------------------|--------------------------------|------|
| Species | zebra fish (Brachydanio rerio) | |
| LC0 | > 10000 | mg/l |
| Duration of exposure | 96 | h |
| Source | Manufacturer's data | |

Daphnia toxicity

| | | |
|----------------------|--|------|
| Species | Daphnia magna | |
| EC0 | > 10000 | mg/l |
| Duration of exposure | 48 | h |
| Method | Regulation (EC) No. 440/2008, Annex, C.2 | |
| Source | Manufacturer's data | |

Bacteria toxicity

| | | |
|----------------------|---------------------|------|
| Species | activated sludge | |
| EC50 | > 10000 | mg/l |
| Duration of exposure | 3 | h |
| Method | OECD 209 | |
| Source | Manufacturer's data | |

12.2. Persistence and degradability**General information**

not determined

Biodegradability

Remarks The methods for determining the biodegradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential**General information**

No data available

Partition coefficient n-octanol/water (log value)

Remarks not determined

12.4. Mobility in soil**General information**

No data available

12.5. Results of PBT and vPvB assessment**General information**

Not applicable

Results of PBT and vPvB assessment

This substance/mixture does not contain components classified as persistent, bioaccumulative and toxic (PBT) at levels of 0.1% or higher.

This substance/mixture does not contain components classified as very persistent and very bioaccumulative (vPvB) at concentrations of 0.1% or higher.

12.6 Endocrine disrupting properties**Endocrine disrupting properties with respect to the environment**

The substance/mixture does not contain components considered to have endocrine disrupting properties to non-target organisms according to REACH Article 57(f) or Regulation (EU) 2017/2100 or Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7. Other adverse effects**General information**

not determined

General information / ecology

Do not discharge product unmonitored into the environment. Ecological data are not available.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Trade name: Iron Oxide Black

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Replaces Version: 7 / DE

Disposal recommendations for the product

Product should be taken to a suitable and authorized waste disposal site in accordance with relevant regulations and if necessary after consultation with the waste disposal operator and/or the competent Authorities.

Disposal recommendations for packaging

Packaging that cannot be cleaned should be disposed off as product waste.
Uncontaminated packaging may be taken for recycling.

SECTION 14: Transport information

Land transport ADR/RID

The product does not constitute a hazardous substance in land transport.

Marine transport IMDG/GGVSee

The product does not constitute a hazardous substance in sea transport.

Air transport ICAO/IATA

The product does not constitute a hazardous substance in air transport.

SECTION 15: Regulatory information

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

Water Hazard Class (Germany)

Water Hazard Class (Germany) Not water hazardous

15.2. Chemical safety assessment

For this substance a chemical safety assessment is not required.

SECTION 16: Other information

Abbreviations

ADR: Accord européen relatif au transport international des marchandises Dangereuses par Route
AGW: Arbeitsplatzgrenzwert
AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (Ordinance on facilities for handling substances that are hazardous to water)
BGW: Biologischer Grenzwert
CAS: Chemical Abstracts Service
DNEL: Derived no effect level
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
GGVSee: Gefahrgutverordnung See
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Code for Dangerous Goods
LC: Lethal concentration
LD: Lethal dose
MAK: Maximale Arbeitsplatz-Konzentration
NOEC: No observable effect concentration
NOEL: No observable effect level
OECD: Organisation for Economic Co-operation and Development
OEL: Occupational exposure limit
PBT: Persistent, Bioaccumulative and Toxic
PNEC: Predicted no effect concentration
RID: Règlement concernant le transport international ferroviaire de marchandises dangereuses
TRGS: Technische Regeln für Gefahrstoffe
VDI: Verein Deutscher Ingenieure
VLEP: Valeurs Limites d'exposition Professionnelle
vPvB: Very persistent and very bioaccumulative
WGK: Wassergefährdungsklasse (water hazard class)

Supplemental information

These data is based on our present knowledge and experience respectively supplier-information. This safety data sheet describes the product in regard to the requirements of safety. The information does not represent an assurance for certain properties. Existing laws and regulations are to be observed by the recipient of our products in own

Safety data sheet in accordance with regulation (EC) No 1907/2006

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responsibility. It is the responsibility of the user, to determine if the product is suitable for the deliberate operational area and the respective intended purpose. A liability for damages in connection with the use of this information is excluded. Relevant changes compared with the previous version of the safety data sheet are marked with: ***