



Safety Data Sheet

Revision date 09/01/2023

**1. PRODUCT AND COMPANY IDENTIFICATION**

**1.1 Product identifiers**

Product name : Iron(II,III) Oxide  
Product Number : 2651WJ  
CAS-No. : 1317-61-9

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

Identified uses : Laboratory chemicals, Manufacture of substances

**1.3 Details of the supplier of the safety data sheet**

Company : Nanostructured & Amorphous Materials Inc.  
1526 Katy Gap Rd, Suite #302,  
Katy, TX 77494, USA

Telephone : +1 281-858-6571  
Fax : +1 281-858-6507

**1.4 Emergency telephone number**

Emergency Phone # : +1 832-800-0355

**2. HAZARDS IDENTIFICATION**

**2.1 Classification of the substance or mixture**

Not a hazardous substance or mixture.

**2.2 GHS Label elements, including precautionary statements**

Not a hazardous substance or mixture.

**2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none**

**3. COMPOSITION/INFORMATION ON**

**INGREDIENTS 3.1 Substances**

Synonyms : Magnetite  
Formula : Fe<sub>3</sub>O<sub>4</sub>  
Molecular weight : 231.53 g/mol  
CAS-No. : 1317-61-9  
EC-No. : 215-277-5

No components need to be disclosed according to the applicable regulations.

#### **4. FIRST AID MEASURES**

##### **4.1 Description of first aid measures**

###### **If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

###### **In case of skin contact**

Wash off with soap and plenty of water.

###### **In case of eye contact**

Flush eyes with water as a precaution.

###### **If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water.

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

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11

##### **4.3 Indication of any immediate medical attention and special treatment needed** No data available

#### **5. FIREFIGHTING MEASURES**

##### **5.1 Extinguishing media**

###### **Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Iron Oxides

##### **5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

##### **5.4 Further information**

No data available

#### **6. ACCIDENTAL RELEASE MEASURES**

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

Avoid dust formation. Avoid breathing vapours, mist or gas. For personal protection see section 8.

##### **6.2 Environmental precautions**

Do not let product enter drains

##### **6.3 Methods and materials for containment and cleaning up**

Sweep up and shovel. Keep in suitable, closed containers for disposal.

##### **6.4 Reference to other sections**

For disposal see section 13.

## **7. HANDLING AND STORAGE**

### **7.1 Precautions for safe handling**

Provide appropriate exhaust ventilation at places where dust is formed.  
For precautions see section 2.2.

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

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

### **7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **8.1 Control parameters**

#### **Components with workplace control parameters**

Contains no substances with occupational exposure limit values

### **8.2 Exposure controls**

#### **Appropriate engineering controls**

General industrial hygiene practice..

#### **Personal protective equipment**

##### **Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

##### **Body Protection**

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

##### **Respiratory protection**

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

##### **Control of environmental exposure**

No special environmental precautions required.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

a) Appearance	Form: powder, Spheres
b) Odour	Odourless
c) Odour Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	Melting point/range: 1,538 °C (2,800 °F) - lit
f) Initial boiling point and boiling range	No data available
g) Flash point	No data available
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	No data available
l) Vapour density	No data available
m) Relative density	4.8 - 5.1 g/mL at 25 °C (77 °F)
n) Water solubility	No data available
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

### 9.2 Other safety information

No data available

## 10. STABILITY AND REACTIVITY

**10.1 Reactivity**

No data available

**10.2 Chemical stability**

Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions**

No data available

**10.4 Conditions to avoid**

No data available

**10.5 Incompatible materials**

Strong acids, Peroxides, Chloroformates

**10.6 Hazardous decomposition products**

Other decomposition products - No data available  
In the event of fire: see section 5

**11. TOXICOLOGICAL INFORMATION****11.1 Information on toxicological effects****Acute toxicity**

LD50 Oral - Rat - male and female - > 5,000 mg/kg

Inhalation: No data available

Dermal: No data available

No data available

**Skin corrosion/irritation**

Skin - Rabbit

Result: No skin irritation

(OECD Test Guideline 404)

**Serious eye damage/eye irritation**

Eyes - Rabbit

Result: No eye irritation

(OECD Test Guideline 405)

**Respiratory or skin sensitisation**

- Guinea pig

Result: Does not cause skin sensitisation on laboratory animals.

**Germ cell mutagenicity**

Hamster

Lungs

Result: negative

**Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified

as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**

No data available

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**Additional Information**

RTECS: No data available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**12. ECOLOGICAL INFORMATION**

**12.1 Toxicity**

No data available

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects**

No data available

**13. DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods**

**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**  
Dispose of as unused product.

#### 14. TRANSPORT INFORMATION

**DOT (US)**  
Not dangerous goods

**IMDG**  
Not dangerous goods

**IATA**  
Not dangerous goods

#### 15. REGULATORY INFORMATION

**SARA 302 Components**  
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**  
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**  
No SARA Hazards

**Massachusetts Right To Know Components**  
No components are subject to the Massachusetts Right to Know Act.

<b>Pennsylvania Right To Know Components</b>	CAS-No.	Revision Date
Triiron tetraoxide	1317-61-9	

<b>New Jersey Right To Know Components</b>	CAS-No.	Revision Date
Triiron tetraoxide	1317-61-9	

**California Prop. 65 Components**  
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### 16. OTHER INFORMATION

**HMIS Rating**  
Health hazard: 0  
Chronic Health Hazard: \*  
Flammability: 0  
Physical Hazard: 0

**NFPA Rating**  
Health hazard: 0  
Fire Hazard: 0

Reactivity Hazard: 0

**Further information**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.