



NANO WINGS PRIVATE LIMITED

Regd. Office and R&D Centre,
#10-1-96, Mamillaguda,
Khammam-507001, Telangana, India
CIN No: U29253AP2014PTC094662

☎ +91-8742-232794
☎ +91-8008488535
✉ info@nanowings.co.in
🌐 www.nanowings.co.in

Material Safety Data Sheet (MSDS)

Ferro Ferric Oxide or Magnetite or Iron Oxide (FeO. Fe₂O₃ or Fe₃O₄) Nanoparticles:

1. Identification of substance:

- * Product name: Ferro Ferric Oxide (Fe₃O₄) powder
- * Stock#: NWNP1409-02

* Manufacturer / Supplier:

Nano Wings Pvt Ltd
Regd. Office and R&D Centre,
10-1-96, Mamillaguda, Khammam – 507001, INDIA
Ph.No: +91-8742-232794; info@nanowings.co.in

2. Composition / Data on Components:

- * CAS#: 1317-61-9
- * Magnetite (Fe₃O₄); Purity: 99%

3. Hazards Identification & Description:

- * Hazardous – Xi Irritant
- * Danger to man and environment
- * 36, 37, 38 - Irritating to Eyes, respiratory system and skin.

4. First Aid measures:

- * **Inhalation** – Move to fresh air. If required, provide artificial respiration. Keep patient warm.
- * **Skin contact** - Immediately wash with water and soap and rinse thoroughly.
- * **Eye contact** - Rinse opened eye for several minutes under running water
- * NEVER swallow.
Seek immediate medical advice in all the above events.

5. Fire fighting measures:

- * Suitable extinguishing agents - Product is not flammable. Use fire fighting measures that suit the surrounding fire.
- * For safety reasons unsuitable extinguishing agents Halogenated extinguisher.
- * Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.

6. Accidental release measures:

- * Use proper personal protective equipment as indicated in Section 8.
- * Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Scoop up with a non-sparking tool, then place into a suitable container for disposal. Avoid generating dusty conditions. Remove all sources of ignition.

7. Handling and Storage:

- * Information for safe handling:
 - Keep the container tightly sealed.
 - Store in cool, dry place in tightly closed containers.
 - Ensure good ventilation at the workplace.
- * Information about protection against explosions and fires:
 - The product is not flammable therefore, NO special requirement.
- * Storage requirements to be met by storerooms and receptacles:
 - No special requirements.
- * Information about storage in one common storage facility:
 - Do not store together with acids and alkalis.

8. Personal protective equipment & measures:

- * Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
- * Eye protection: Safety glasses
- * Skin protection: Nitrile gloves and protective clothing such as cotton lab coat.
- * Body protection: Protective work clothing.
- * Ventilation: An exhaust system is recommended.
- * The usual precautionary measures for handling chemicals should be followed.
- * Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

9. Toxicological information

Primary Irritant effect:

On the skin: Irritant to skin and mucous membranes.

On the eye: Irritant.

Sensitization: No sensitization effects.

Sub-acute to acute toxicity: Iron compounds may cause vomiting, diarrhea, pink urine, black stool, and liver damage. May cause damage to the kidneys. Irritating to the respiratory tract, they may cause pulmonary fibrosis if dusts are inhaled.

Additional toxicological information: The chronic toxicity of this substance is not fully known.

Carcinogenicity: Not listed by EPA, IARC, NTP, OSHA or ACGIH.

10. Product description – Physical and Chemical Properties:

Color: Dark Brown

Form: Powder

Odor: Odorless

Purity: 99%,

Average Particle Size (APS): 100-200 nm – As per SEM

Morphology: cubical and nearly Spherical

Melting Point: 1538°C

Boiling Point: Not determined

11. Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid:

Temperature above 60 deg C. Decomposition begins.

Incompatibilities with Other Materials:

Strong acids,

Strong bases,

Oxidizing agents.

Hazardous decomposition products formed under fire conditions: Iron oxide fume.

Other decomposition products - No data available

12. Ecological Information Eco-toxicity:

General notes: Do not allow material to be released to the environment without proper governmental permits.

BOD5 and COD: Not available.

13. Disposal Considerations Waste Disposal:

Consult state, local or national regulations to ensure proper disposal.

Disposal must be made according to official regulations.

14. Transport information

Not a hazardous material for transportation.

* DOT regulations

Hazard class: None

* Land transport (cross-border)

ADR/RID class: None

* Maritime transport

IMDG Class: None

* Air Transport

ICAO/IATA Class: None

* Transport/Additional information: Not dangerous according to the above specifications.

15. Regulatory Information:

Product related hazard information

- **Hazard symbols:** Xi Irritant
- **Risk phrases:** 36/37/38 Irritating to eyes, respiratory system and skin.
- **Safety phrases:** 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. 37/39 Wear suitable gloves and eye/face protection.
- **National regulations:** None
- **USA regulations:** All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory.

Information about limitation of use: For use only by technically qualified individuals.

16. Other Information

Label Precautions: Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Avoid breathing dust or vapors. Keep container closed. Use only with adequate ventilation.

Label First Aid: If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. In all cases, seek medical attention.

Product Use: Laboratory Reagent.

Disclaimer: Nano Wings Pvt Limited believes that the information in this Material Safety Data Sheet is accurate and represents the best and most current information available to us. Users 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 Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user. Accordingly, Nano Wings Pvt Limited will not be responsible for damages resulting from use of or reliance upon this information.