

MATERIAL SAFETY DATA SHEET

SUBSTANCE: - MAGNETITE FE₃O₄

| Supplier Details | | | |
|---|---|----------------------------|--|
| Supplier Name |  | Emergency Telephone | +919823033705 +917798777721 |
| Address | N-39, MIDC, Hingna, NAGPUR 440016 INDIA | Email | paplnagpur@gmail.com info@phoenixamalgams.com |
| Person Responsible for updating MSDS | Manager Environment & Occupational Hygiene | URL | www.phoenixamalgams.com |

1. Product Information

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| MAGNETITE | EC Number : 215-169-8 |
| CAS No : 1309-38-2 | REACH Registration Number : Exempt |

2. Data Composition

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| Name | Magnetite |
| Chemical Formula | Fe ₃ O ₄ |
| Density | 4.80 – 5.1 |

3. Physical & Chemical Properties

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| Boiling point | NA | Vapor pressure | 1mm HG 20°C |
| Appearance | Black powder | Evaporation Rate | NA |
| Odour | Odourless | Incompatibility | None |
| Chemical properties | Stable Substances | % by weight | 100% |
| Solubility in water | Insoluble | Melting point | 2550 - 2900 F |
| Molecular Weight | 231.53 | pH | 6-8 [in aqueous suspension] |

4. Stability & Reactivity

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| Reactivity | No Specific Reactivity Hazards associated with this product. |
| Chemical stability | Stable under normal temperature conditions. |
| Possibility of hazardous reactions | Not relevant |
| Conditions to avoid | No specific conditions are likely to result in a hazardous situation. |
| Incompatible materials | No specific or groups of materials are likely to react to produce a hazardous situation. |
| Materials to avoid | |
| Hazardous decomposition products | None under normal circumstances. |

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| Hazardous polymerization | Will not occur. |
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5. Hazardous Identification

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| Emergency Overview | Black powder may irritate respiratory tract. |
| Route (s) of Entry | Inhalation and ingestion. |
| Acute Exposure | Not expected to be irritating to eyes and skin and essentially non-toxic by ingestion. |
| Chronic Exposure | Prolonged, frequent and excessive exposure may result in siderosis (accumulation of iron within the lungs). |
| Carcinogenicity (NTP) (IARC) (OSHA) | No |
| Eye | Dust may irritate eyes through mechanical action. |
| Skin contact | May irritate through mechanical action. |
| Inhalation | May be irritating to the nose, throat and respiratory tract. |
| Ingestion | None Expected |
| Sign and symptoms | Irritation of nose, throat and respiratory tract which may result in sneezing, coughing and running nose. |
| Carcinogenicity | This product is not listed as carcinogens by NTP, IARC, OSHA or ACGIH as magnetic. |
| Agency's | Osha : Occupational Safety & Health Administration; TSCA Toxic Substances Control Act ; CERCLA : Comprehensive Environmental Response Compensation and Liability Act, NTP National Toxicology Program; IARC : Internation Agency for Research on Cancer; ACGIH : American Conference of Government Industrial Hygienist; RCRA : Resource Conservation and Recovery Act. |

6. First Aid Measures

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| Eye contact | Check for and remove any contact lenses. Immediate flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. |
| Skin contact | After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Cold water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. |
| Serious Skin contact | Wash with a disinfectant soap and cover the contaminated skin with an anti- bacterial cream. Seek medical attention. |
| Inhalation | Allow the victim to rest in a well- ventilated area. Seek medical attention. |
| Serious Inhalation | Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. Seek medical attention. |
| Ingestion | Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. Seek immediate medical attention. |
| Serious Ingestion | Not Available |

7. Fire measurers & explosion data

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| Flammability of the product | Non- Flammable |
| Auto-Ignition Temperature | Not Applicable. Flash points : Not applicable |
| Flammable limits | Not applicable |
| Products of Combustion | Not available |
| Fire hazardous in presence of Various substances | Not applicable |
| Explosion Hazards in presence of various Substances | Not Applicable |
| Risks of explosion of the product in presence of mechanical impact | Not available |
| Risks of explosion of the product in presence of static discharge | Not available |
| Fire Fighting media and Instructions | Not applicable. Special Remarks on fire Hazards not available |
| Special Remarks on explosion Hazards | Not available |

8. Accidental Release Measures

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| Small Spill | Use appropriate tools to put the spilled solid in a convenient waste disposal container. |
| Large spill | Stop leak. Prevent entry into sewers, basements or confined areas. Call for assistance on disposal. |
| Personal precaution, productive equipment and emergency procedures | Follow precaution for safe handling described in this safety data sheet. |
| Environmental precaution | The product should not be dumped in nature but collected and delivered according to agreement with the local authorities. |
| Methods and material for containment and cleaning up | Avoid dust formation. Remove spillage with vacuum cleaner. If not possible collect spillage with shovel, broom or the like. Transfer to a container for disposal. |
| Reference to other sections | For personal protection see section 6 & for waste disposal see section 13. |

9. Handling & Storage

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| Work Practices and Hygienic Practices : | Avoid contact with eyes and ingestion. Make sure that work areas have some form of ventilation or fresh air available. |
| Storage and handling Practices | Store and handle in accordance with all current regulation and standards, store outside or in a detached building. Avoid crating dust, contact with eye, skin and clothing. |

10. Exposure Control / Personal Protection

Exposure Limits/Guidelines

| Chemical Name | CAS# | ACGIH TWA | OSHA TWA | SWA | NIOSH |
|---|---|--------------------|--------------------|------------|--------------------|
| Magnetite, | 1309-38-2 | 5mg/m ³ | 6mg/m ³ | Not Listed | 5mg/m ³ |
| Ventilation and Engineering Controls | Use with adequate ventilation to ensure exposure levels are maintained below exposure limits. Use local exhaust ventilation to control airborne dust. Ensure eyewash stations are available near where this material is used. | | | | |
| Respiratory Protection | A NIOSH approved air purifying respirator with approved cartridge or canister may be appropriate under extreme circumstances where airborne concentrations are expected to exceed exposure limits. | | | | |
| Eye Protection | Wear appropriate splash resistant safety glasses. | | | | |
| Hand Protection | Wear appropriate chemical resistant gloves. | | | | |
| Body Protection | Wear appropriate chemical resistant clothing. | | | | |

11. Toxicological Information

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| Routes of entry | Absorbed through skin. Dermal contact, Eye contact, Inhalation, Ingestion. |
| Toxicity to animals | Not Available |
| RAT LD 50 | 5000 mg/kg |
| LC 50 | Not considered to be a carcinogen by ACGIH, IARC, NTP, OSHA, MSHA, CA Prop65 |
| Chronic Effects on Humans | Not Available |
| Other Toxic effects on Humans | Not Available |
| Special remarks on Toxicity to animals | Not Available |
| Special remarks on Chronic effects on humans | Not Available |
| Special remarks on other Toxic effects on Humans | Not Available |

12. Ecological Data

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| Ecotoxicity | Not regarded as dangerous for the environment. No harmful effects on human, and is not toxic to fauna and flora. Non-harmful to the marine environment. |
| BOD₅ and COD : | Not available |
| Products of Biodegradation | Not available |
| Toxicity of the products of Biodegradation | Not Available |
| Special remarks on products of Biodegradation | Not Available |

13. Disposal consideration

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| Waste disposal | Waste must be disposal of in accordance with local environment control regulations & the local authorities. |
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14. Transport

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| DOT Classification | Not classed as Hazardous |
| Road Transport ADR/RID and GGVS/GGVE | Not classed as Hazardous UN-No: None / None Regulated |
| Sea Transport IMDG/GGV See | UN-No: None / None Regulated |
| Air Transport TCAO/IATA | UN-No: None / None Regulated |

15. Regulatory Information

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| Risk Phrase R36/R 37/R38 | Irritating to eyes, respiratory system and skin. |
| Safety phrase S26 | In case of contact with eyes, rinse immediately with plenty of water. |
| Regulatory information | According to OSHA 29 CFR 1910.1200 Iron Oxide is Not "Extremely Hazardous or Toxic". Values are given for permissible exposure limits and threshold values for dusting and fumes. There are no toxic chemicals under SARA title iii section 313. This product is listed on TSCA inventory. This product has no reportable quantities (RQ) under CERCLA. It is not considered a hazardous waste under CERCLA or RCRA. This product in not listed on the Hazardous materials HM 181. Iron oxide does not appear on the Hazardous Substances List. |

16. Disclaimer

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