Material Safety Data Sheet

Section 1 - Product and Company Identification

Product Identification: MANGANESE-ZINC FERRITE POWDER  
Date Prepared: 04.JULY 2013  
Manufacturer's Information  
Manufacturer's Name: SAMWHA ELECTRONICS CO. LTD.  
Manufacturer's Address: 124-2, Buk-Ri, Namsa-Myun, Cheoin-Gu, Yongin-Si, Gyeonggi-Do, Korea  
Telephone: 82-31-374-5501  
FAX: 82-31-333-4803  
Web: http://www.samwha.co.kr/electronics

Section 2 - Composition/Information on Ingredients

Component: Manganese Zinc Ferrite (Mn-Zn Ferrite) is a material consisting of oxides of the following  

Ingredient Name: Iron Oxide (Fe₂O₃) Ingredient Name: Manganese Oxide (Mn₃O₄)  
CAS Number: 1309-37-1 CAS Number: 1317-35-7  
Percentage : 65.0-75.0 Percentage : 15.0-30.0

Ingredient Name: Zinc Oxide (ZnO)  
CAS Number: 1314-13-2  
Percentage : 5.0-15.0

Section 3 - Hazards Identification, Including Emergency Overview

Health Hazards Acute & Chronic: Acute: No toxic effects in solid form. 
   Chronic: If cut and ground improperly, inhalation of dust is not recommended.  
Signs & Symptoms of Overexposure: None specified by manufacturer.  
Medical Conditions Aggravated by Exposure: None.  
LD₅₀ LC₅₀ Mixture: None specified by manufacturer.  
Route of Entry Indicators:  
Inhalation: YES  
Skin: NO  
Ingestion: NO  
Carcinogenic NTP: NO  
IARC: NO  
OSHA: NO
Section 4 - First Aid Measures

First Aid:
Inhalation: Move to fresh air.
Eye: Flush with water for at least 15 minutes.
Skin: Wash with soap & water.
Ingestion: Call MD immediately (FP N).

Section 5 - Fire Fighting Measures

Fire Fighting Procedures: Wear NIOSH/MSHA approved SCBA & Full protective equipment (FP N).
Relatively inert ceramic.
Unusual Fire or Explosion Hazard: If in instant contact with any open flame, may tend to shatter.
Extinguishing Media: Use media suitable for surrounding fire (FP N).
Flash Point: N/K

Section 6 - Accidental Release Measures

Spill Release Procedures: None.

Section 7 - Handling and Storage

Handling and Storage Precautions:
Other Precautions:

Section 8 - Exposure Controls & Personal Protection

Respiratory Protection: NIOSH/MSHA approved dust-fume type if not ground with liquid coolant.
Ventilation: General ventilation.
Protective Gloves: Waterproof gloves.
Eye Protection: Chemical workers goggles (FP N).
Other Protective Equipment: NONE.
Work Hygienic Practices: Grind wet to eliminate dust.

Section 9 - Physical & Chemical Properties

Boiling Point: Not available
Melting Point: 2732°F, 1500°C
Vapor Pressure: Not available, Vapor Density: Not available
Specific Gravity: 5.1 (H*2O=1)
pH: Not available
Evaporation Weight and Reference: Not available
Solubility in Water: NIL
Appearance and Odor: Black odorless solid
### Section 10 - Stability & Reactivity Data

- **Stability Indicator**: Yes
- **Materials to Avoid**: Acids
- **Stability Condition to Avoid**: None specified by manufacturer.
- **Hazardous Decomposition Products**: May form hydrogen if dissolved in acids.
- **Hazardous Polymerization Indicator**: No
- **Conditions to Avoid Polymerization**: Not Relevant.

### Section 11 - Toxicological Information

- **Toxicological Information**: N/P

### Section 12 - Ecological Information

- **Ecological Information**: N/P

### Section 13 - Disposal Considerations

- **Waste Disposal Methods**: Can be disposed of as non-hazardous solid waste with local, state and federal laws.

### Section 14 - MSDS Transport Information

- **Transport Information**: 

### Section 15 - Regulatory Information

- **SARA Title III Information**: N/P
- **Federal Regulatory Information**: N/P
- **State Regulatory Information**: N/P

### Section 16 - Other Information

- **Other Information**: N/P