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 Ferrtie) 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 15minutes.

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

Repiratory 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 Hygenic Practices: Grind wet to eliminate dust.

Section 9 - Physical & Chemical Properties

Boiling Point: Not available Melting Point: 2732F,1500C

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 dissoved 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

