

**MATERIAL SAFETY DATA SHEET****SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**PRODUCT NAME:** ECCOSORB<sup>®</sup> MCS

**GENERAL CHEMICAL DESCRIPTION:** Silicone Absorber

**INTENDED USE:** **Cavity Resonance Absorber** - Thin, flexible, magnetically-loaded, electrically non-conductive silicone sheet that is fire retardant per the UL-94 V1 standard

**COMPANY NAME:** Emerson & Cuming Microwave Products, Inc.  
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**EMERGENCY PHONE NUMBER** CHEMTREC USA: 1-800-424-9300  
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**DATE OF MSDS REVISION:** 09-19-2011

**SECTION 2. COMPOSITION AND INFORMATION ON INGREDIENTS**

ELEMENT	CAS NUMBER	WEIGHT (%)	OSHA PEL* (mg/m <sup>3</sup> )	
			TWA	STEL
Cured Silicone Sheet containing: Iron Powder		60-90	NE	NE

\*ACGIH TLVs different from OSHA PELs are shown in brackets. NE = Not Established.

**SECTION 3. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW:** Non-flammable. Get medical attention if symptoms persist.

**POTENTIAL HEALTH EFFECTS:** Respiratory tract, eye, and skin irritation

**INHALATION:** Dusts or vapors generated during machining operations may cause respiratory irritation.

**INGESTION:** May cause slight skin irritation.

**SKIN:** Harmful if swallowed.

**EYES:** Dusts generated during machining operations may cause minor eye irritation.



The recommendations described in this section are provided as general guidance for minimizing exposure when handling this product. Because usage conditions will vary depending on customer application, specific safe handling procedures should be developed by a person knowledgeable in the intended usage conditions and equipment. Employees must be properly trained in safe handling of this product prior to use.

**VENTILATION RECOMMENDATIONS:** Provide effective mechanical exhaust ventilation to draw dusts or fumes away from the worker during machining operations and prevent routine inhalation.

**STORAGE:** Keep away from open flames and heat sources. Consult the product Technical Bulletin for detailed storage information

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## SECTION 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

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**VENTILATION AND ENGINEERING CONTROLS:** Effective mechanical exhaust ventilation to draw dusts or fumes away from the worker.

**PERSONAL PROTECTION:** Dusts generated during machining or grinding operations may cause skin and eye irritation. Wear proper eye protection during operations which may involve machining or grinding of material. Wear appropriate protective gloves. Normal work clothing should be washed before re-use. Wash hands and face thoroughly after handling this product and before eating, drinking or smoking.

**RESPIRATORY PROTECTION:** Effective mechanical exhaust ventilation to draw dusts or fumes away from the worker during machining operations and prevent routine inhalation.

**OTHER REQUIREMENTS:** Wash hands and face thoroughly after handling this product and before eating, drinking or smoking. Emergency eye wash facilities and safety shower must be available.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>APPEARANCE:</b>	Gray flexible sheet
<b>ODOR:</b>	Not Applicable
<b>VOLATILE ORGANIC COMPOUND CONTENT:</b>	Not Applicable
<b>PHYSICAL STATE:</b>	Solid
<b>BOILING POINT (°F):</b>	Not Applicable
<b>VAPOR PRESSURE @ 25°C:</b>	Not Applicable
<b>EVAPORATION RATE:</b>	Not Applicable
<b>SPECIFIC GRAVITY (WATER=1):</b>	>4.2
<b>VAPOR DENSITY:</b>	Not Applicable
<b>SOLUBILITY IN WATER:</b>	Not Applicable

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## SECTION 10. STABILITY AND REACTIVITY

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Product is stable under normal handling and storage conditions. However, review reactivity data concerning conditions to avoid and incompatible substances.

**INCOMPATIBILITY:** Direct contact with strong oxidizers, acids, bases.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon dioxide, carbon monoxide, aldehydes, silicone and iron oxides, organic acids, amines and organic substances may be formed during combustion. The chemical nature and quantity of decomposition by-products will vary widely depending on the conditions of combustion.

**CONDITIONS TO AVOID:** Avoid exposure to open flame or heat sources, and direct contact with incompatible substances.

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## SECTION 11. TOXICOLOGICAL INFORMATION

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General information for iron ions and inorganic and organic iron compounds.

Toxicity not established for product as a whole. Iron: Probable oral lethal dose (Human) 0.5-5 g/kg or between 1 oz and 1 pint (or 1 lb) for 70 kg person (150 lb).

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## SECTION 12. ECOLOGICAL INFORMATION

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Iron: Iron compounds may be released through weathering of soil and rocks. Ionic iron compounds would exist in the particulate phase in air, and these compounds may be removed from the air by wet and dry deposition. Common oxidation states of iron under environmental conditions are +2 and +3, with the +3 state preferred under oxidizing conditions. In general, metal cations in solution are attracted to the negatively charged surfaces of soil particles. Iron(III) ions have been shown to be strongly retained by humic and fulvic acid fractions separated from soils. Iron(II) and (III) ions form strong complexes with fulvic acid. Adsorption of iron depends on soil organic matter and pH; an increase in either of these factors will usually increase adsorption. The mobility of iron ions in soils is influenced as well by redox potential, with iron being more mobile under reducing than under oxidizing conditions. Chelating agents (e.g., nitrilotriacetic acid, NTA) may enhance the mobility of iron in soils. Iron compounds would not volatilize from moist or dry soil surfaces, due to their ionic character. Iron ions are retained on organic matter found in environmental waters. In solution, aquated (ions with bound water molecules) iron(III) ions are expected to hydrolyze or form complexes. At pH<1 the hexaaqua ion ((Fe(H<sub>2</sub>O)<sub>6</sub>)<sup>3+</sup>) is the predominated species, as the pH increases above 1, a stepwise hydrolysis occurs (e.g., the first hydrolysis forms (Fe(H<sub>2</sub>O)<sub>5</sub>(OH))<sup>2+</sup>). Between pH 1-2 various species of hydroxo and oxo iron compounds may be formed. Above pH 2 colloidal gels are formed, giving a precipitate of the red-brown gelatinous hydrous iron oxide (rust). In the presences of complexing anions, such as chloride, the hydrolysis of iron(III) is more complicated and can result in chloro, aqua, and hydroxo species. Iron(II) ions would be expected to be oxidized to iron(III) under most environmental conditions. Iron(II) hydroxide is precipitated from solution by base and is rapidly oxidized in air giving hydrated iron(III) oxide (rust). Iron(II) ion is also oxidized by other common oxidants, such as nitrite and nitrate. Iron(II) and (III) ions can form complexes with ligands containing halide, nitrogen, oxygen, sulfur donor groups. Volatilization from water surfaces will not occur due to the ionic character of iron compounds.

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## SECTION 13. DISPOSAL CONSIDERATIONS

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Maximize product recovery for reuse or recycling. Waste must be disposed of in accordance with federal, state and local environmental control regulations. If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste (40 CFR 261.20-24). Use may also generate liquid wastes with metal concentrations in excess of those permitted through pretreatment or direct discharge NPDES requirements. Appropriate analyses should be conducted to ensure compliance with existing wastewater permits.

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## SECTION 14. TRANSPORT INFORMATION

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**DOT HAZARDOUS MATERIAL DESCRIPTION:** Not Applicable  
**PROPER SHIPPING NAME:** Not Applicable  
**DOT HAZARD CLASS:** Not Applicable  
**DOT ID:** Not Applicable  
**CANADIAN TRANSPORTATION OF DANGEROUS GOODS CLASSIFICATION:** Not Applicable

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## SECTION 15. REGULATORY INFORMATION

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TSCA Status: All compounds of this product are listed in the EPA Toxic Substance Control Act Inventory.  
SARA Status: This product does not contain any substances regulated by the SARA Section 313 amendments to RCRA.

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## SECTION 16. OTHER INFORMATION

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