

MSDS NUMBER: ARCHIT
PRODUCT NAME: Architectural Material (Copper clad 430SS)
CHEMICAL NAME: Mixture – Metal Alloy

MSDS DATE: July 25, 2007

I. PRODUCT IDENTIFICATION

Manufacturer: Engineered Materials Solutions, Inc.
Address 39 Perry Avenue
Attleboro, MA 02703

Telephone(508) 342-2100
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This material is a three layer product with copper (ASTM B370) clad to both sides of UNS S43000 Steel. The copper cladding is approximately 10% of the total thickness on each side, with the steel comprising the remaining portion (~80%) of the total thickness.

TRANSPORTATION DATA

DOT Proper Shipping Name: NA
DOT Hazard Class: NA

DOT I.D. Number: NA

II. HEALTH HAZARD INFORMATION

Emergency and First Aid Procedures

In solid form, these materials are not hazardous. Dust and fumes are hazardous materials. First aid and symptoms noted are for exposure under conditions of release (as a dust or fume).

Eyes: Flush eyes with large amounts of water for at least 15 minutes holding lids apart to ensure flushing of the entire eye surface. Seek medical attention immediately.

Skin: Immediately remove contaminated clothing and shoes. Wash skin thoroughly with soap and water.

Inhalation: If symptoms of lung irritation occur (coughing, wheezing, or breathing difficulty) remove from exposed area to fresh air immediately, and get medical attention.

Ingestion: Not a likely route of exposure for a finished metal alloy. If dust is ingested, get medical attention immediately.

NOTES TO PHYSICIAN: The toxicological properties of these metal alloy mixtures are unknown. However, in the solid form this product is not expected to produce any overt toxicological symptoms. Nonetheless, overexposure may produce some symptoms similar to the individual elements.

Routes of Entry/Sites of Injury

Inhalation: Inhalation is not expected. If product is in the dust form; they may cause chills, headache, and edema.

Skin: Absorption through intact skin is not expected. Dust or vapors may be irritating to skin.

Eye Contact: Dust or vapors are an irritant to the eyes causing pain, lacrimation, and general inflammation.

Ingestion: In industrial environments, ingestion is unlikely but, if ingested, may produce gastrointestinal distress, nausea, dryness of the mouth, metallic taste, and a garlic breath.

Effects of Overexposure

Acute: Dust or vapors may cause emetic reactions, chills and fever, headache, cough, tremor, insomnia, irritability, tremors, weakness, salivation, and edema of the lungs.

Chronic: Long-term health effects are not expected. However, dust or vapors have the potential to cause lung and kidney damage, and damage to the central nervous system including tremors and psychic disturbances.

Medical Conditions Generally Aggravated by Exposure: Kidney and liver disorders, smoking, and alcoholism.

III. HAZARDOUS INGREDIENTS

ASTM B370
Copper Alloy

Element	CAS Number	% Composition by Weight	Physical Description	OSHA mg/m3 8-HR TWA	ACGIH mg/m3 8-HR TWA
Copper	7440-50-8	>99.5	Copper Dust	1	1
Copper	7440-50-8	>99.5	Copper Fume	0.1	0.2

UNS S43000
Steel Alloy

Element	CAS Number	% Composition by Weight	Physical Description	OSHA mg/m3 8-HR TWA	ACGIH mg/m3 8-HR TWA
Carbon	7440-44-0	<0.12	Carbon	15	
Iron	7439-89-6	Balance	Iron Oxide Fume	10	5
Chromium (non-hexavalent)	7440-47-3	14.0 – 18.0	Chromium Metal	1	0.5
Manganese	7439-96-5	<1.0	Manganese	5	1
Silicon	7440-21-3	<1.0	Respirable Fraction	5	10
Phosphorus	7723-14-0	<0.04	Phosphorus	0.1	

IV. FIRE AND EXPLOSION DATA

Flash Point: NA

Flammable Limits in air, % by volume: Lower: ND

Auto ignition Temperature: ND

Upper: ND

Extinguishing Media: Use extinguishing media suitable for surrounding fire.

Special Fire Fighting Procedures: Use Self Contained Breathing Apparatus (SCBA).

Unusual Fire And Explosion Hazard: In a dust form and at elevated temperatures product may burn and release metal oxides.

V. SPECIAL PROTECTION

Ventilation Requirements: Local exhaust recommended.

Specific Personal Protective Equipment

Respiratory: If dust is generated, use a NIOSH approved respirator.

Eye: If dust is generated, use safety glasses or chemical goggles.

Gloves: If a dust is generated, use an impervious glove.

Other Clothing and Equipment: If any exposure to dust or fume is expected, use good personal hygiene; wash hands before eating/smoking. Do not smoke while handling the material.

VI. PHYSICAL DATA

Molecular weight: NA

Vapor Pressure: NA

Evaporation Rate (Butyl Acetate = 1): NA

% Volatile by volume: 0

Vapor Density (Air = 1): NA

Appearance and Odor: Solid with no odor.

Solubility in H₂O % by Weight: Not soluble in water.

VII. REACTIVITY DATA

Stability: Product is stable under normal conditions.

Water Reactivity: Not reactive with water.

Conditions Contributing To Instability: None known.

Incompatibility: Strong oxidizing agents, strong organic acids, and strong inorganic acids.

Hazardous Decomposition Products: Oxides of cadmium, cobalt, and nickel.

Conditions Contributing To Hazardous Polymerization: None.

VIII. HANDLING AND STORAGE

Handling And Storage Precautions: Store away from heat, acids, and oxidizing agents.

IX. ENVIRONMENTAL PROCEDURES

Steps To Be Taken If Material Is Released Or Spilled

If internal material is released, pick up intact material -- do not create any dust. Wear suitable protective equipment as dictated by the size and location of the released material.

Waste Disposal Method

Avoid incineration. Dispose of waste material in accordance with Federal, State and local regulations. Some metals are suitable for recycling.

X. ADDITIONAL INFORMATION

The precautions listed in this data sheet are recommended when the material is used as described by product information and specifications. Unusual handling or use methods might require additional or different personal protective equipment.

CAS Number = Chemical Abstract Service Number; PEL = OSHA Permissible Exposure Limit; TLV = ACGIH Threshold Limit Value; ND = Not determined or not available; NA = Not Applicable; ppm = Parts Per Million; mg/m³ = milligrams per cubic meter.
