Material Safety Data Sheet

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Section I. Identification

Trade Name: Corbin Core Bond (CCB-4, CCB-16, CCB-128)

HMIS/NFPA Hazard Identification System:

Health: 1 Reactivity: 0
Flammability: 0 Protective Code: S,E

Printed Date: 04/04/94

Section II: Hazardous Ingredients

Zinc Chloride C.A.S. 7646-85-7
OSHA PEL: 1mg/M^3 (fume)
ACGIH TLV 1Mg/M^3 (fume)
STEL-2Mg/M^3 (fume)
% less than 50%

Ammonium Chloride C.A.S. 12125-02-9
OSHA PEL: 10mg/M^3
ACGIH TLV 10mg/M^3 (fume)
STEL-20Mg/M^3 (fume)
% less than 20%

Section III: Physical Data

Boiling Point: 220°F.
Vapor Density: n/a (Vapor pressure = 0.01 mm Hg.)
Evaporation Rate: n/a
Specific Gravity: 1.23
Solubility in Water: 100%
pH= 4.05
Appearance and color: light yellow to clear liquid, slight acidic odor.

Section IV: Fire and Explosion Hazard Data

D.O.T. Category: Not Regulated
Flash Point: n/a
Extinguishing Media: n/a
Unusual Fire and Explosion Hazards: None
LEL: n/a UEL: n/a

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Section V: Reactivity Data

Stability: Stable.

Conditions to avoid: Avoid contact with aluminum, zinc, iron (highly corrosive). Store in glass or reagent-grade plastic containers only (such as high density polyethylene). Attacks concrete, marble and calcium-based materials. Neutralize spills with baking soda and water. Avoid contact with skin and eyes.

Hazardous Decomposition Products: Corrosive vapor (HCl) with zinc chloride and ammonium chloride fumes.

Section VI: Health Hazard Data

USE GLOVES AND EYE PROTECTION when handling or using. Avoid breathing vapors. Use with adequate ventilation. Wash contacted areas immediately with running water. Seek immediate medical attention for contact with eyes, or ingestion.

Zinc Chloride component: Principal Health Hazards. Oral LD50 for zinc chloride: 350 mg/kg in rats. Causes burns. Fumes, dust, or mist may cause injury to the resporatory tract. Severe exposure may cause lung damage. The compound, in either solid or solution form, is corrosive to the eyes and skin. Toxic effects described in animals from short exposure include corrosion of the mucosal surfaces, liver effects and kidney effects. Toxic effects in animals occurring only with inhalation exposures, are lower respiratory irritation with pulmonary edema. Tests in bacterial or mammalian cell cultures demonstrate mutagenic activity. Tests in some animals indicate that the compound may have embryotoxic activity. Human health effects of overexposure may initially include: eye irritation with discomfort, tearing, or blurring of vision; skin irritation with discomfort or rash; or irritation of the upper respiratory passages. Higher exposures may lead to these effects: skin burns or ulceration; eye irritation with discomfort of blurring of vision, temporary lung irritation effects with cough, discomfort, difficulty breathing, or shortness of breath; possibly modest initial symptoms, followed in hours by severe shortness of reath, requiring prompt medical attention; or fatality from gross overexposure by fume inhalation or by significant ingestion. There are inconclusive or unverified reports of human sensitization. Individuals with pre-existing diseases of the lungs may have increased susceptibility to the toxicity of excessive exposures. Exposure to zinc chloride fume can cause damage to the mucous membranes of the nasopharynx and respiratory tract. Exposed persons have experienced a pale gray cyanosis. Zinc chloride is caustic and can cause ulceration of exposed surfaces of the skin. Inhalation may produce a severe pneumonitis resulting from irritation of the respiratory tract.

Ammonium Chloride: Ammonium chloride is not considered a serious industrial hazard. Few of the references books on industrial health or toxicology even mention it. However, Sax does list ammonium chloride, indicating it to be a mild irritant to the skin and respiratory passages, with a low-grade systemic toxicity by ingestion. The suggestion has ben been made that large quantities of fume may be toxic by inhalation. Large amounts of ammonium chloride fume are frequently evolved in galvanizing operations. A study of these processes indicated that control of fumes by mechanical dilution or local exhaust ventilation was usually provided. Concentrations of ammonium chloride were found to average below 5 mg/M^3 of air, although peak concentrations were much higher.