Integrated Engineers, Inc.

Health	Flammability
2	0
Hazard	**Reactivity**
2	0

NFPA FIRE HAZARD IDENTIFICATION SYSTEM

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

Trade Name(s): Floccin A (Other names include A,B,C... through Z.)

Generic Name(s): Mixture of Montmorillonite and other proprietary ingredients.

Chemical Name(s): Sodium Montmorillonite; and other proprietary ingredients

Manufacturer: Integrated Engineers, Inc. Address: 4308 Greenwood Way Oakhurst, CA 93644	Telephone Numbers: Information: (559) 683-8284 EMERGENCY: (559) 683-8284

II. HAZARDOUS INGREDIENTS

Ingredient	CAS No.	%	Hazard
Crystalline Silica (SiO_2) as Quartz			Low concentrations of crystalline silica (SiO_2) in the form of quartz may be present in airborne bentonite dust. The concentration level of total free silica in airborne bentonite dust is variable depending upon origin of bentonite ore, fineness of product, moisture content of product, local humidity and wind conditions, etc. (See Section VI).

Note: Specific identity of product ingredients withheld as a trade secret. Ingredient identity is available to health professionals and others in accordance with 29 CRF 1910.1200(i). Only the most restrictive data for the ingredients in this product are given here.

III. PHYSICAL DATA

Boiling Point (°F): NA	Specific Gravity (H_2O=1): 2.40-2.50
Vapor Pressure (mm. Hg): NA	Melting Point: Approx. 1450°C
Vapor Density (Air = 1): NA	Evaporation Rate (Butyl Acetate = 1): NA
Solubility in Water: Slightly soluble, forms flocculated suspension.	
Density (at 20° C): 89.3 lbs./cu.ft. as dry product.	

Appearance and Odor: Bluegray to gray green as moist solid, light tan to gray as dry powder. No odor.

IV. FIRE AND EXPLOSION DATA

Flash Point: NA	Flammable Limits: LEL: NA UEL: NA

Special Fire Fighting Procedures: NA

Unusual Fire and Explosion Hazards: Product will not support combustion.

Extinguishing Media: None for product. Any media can be used for the packaging. Product becomes slippery when wet.

V. REACTIVITY

Stability: Stable

Hazardous Polymerization: None

Incompatibility: none

Hazardous Decomposition Products: Limited amounts of Sulfur Oxide gases may form when product temperature exceeds 760°C. These gases are corrosive oxidizers and are toxic.

NA = Not Applicable ND = Not Determined	Date Prepared : April 29, 2002

VI. HEALTH HAZARD INFORMATION

Routes of Exposure and Effects:

Skin: Prolonged contact may cause irritation and drying resulting in dermatitis.

Eyes: May irritate or burn eyes.

Inhalation: Acute (short term) exposure to dust levels exceeding the PEL/TLV's may cause irritation of respiratory tract resulting in a dry cough. Chronic (long term) exposure to free silica containing airborne bentonite dust where levels are higher than PEL/TLV's may lead to development of silicosis or other respiratory problems. Persistent dry cough and labored breathing upon exertion are symptomatic.

Ingestion: May irritate gastrointestinal tract.

Permissible Exposure Limits: (for air contaminants)	OSHA PEL (8hr. TWA)	ACGIH TLV
Total dust	ND	ND
Respirable dust	2mg/m^3	2 mg/m^3
Crystalline Quartz (respirable)	0.1mg/m^3	0.1mg/m^3

Carcinogenicity: None of the ingredients are listed by NTP, IARC or OSHA. IARC, 1987, concludes that there is limited evidence suggesting the carcinogenicity in humans of inhaled crystalline silica (IARC Class 2A).

Acute Oral LD_{50}: ND	Acute Dermal LD_{50}: ND	Aquatic Toxicology LC_{50}: ND

Emergency and First Aid Procedures:

Skin: Wash with soap and water until clean.

Eyes: Flush with water until irritation ceases. If irritation persists contact physician.

Inhalation: Move to area free from dust. If symptoms of irritation persist contact physician. Inhalation may aggravate existing respiratory illness.

VII. HANDLING AND USE PRECAUTIONS

Steps to be Taken if Material is Released or Spilled: Avoid breathing dust; wear respirator approved for silica bearing dust. Vacuum up to avoid generating airborne dust. Avoid using water. Product slippery when wetted.

Waste Disposal Methods: Product should be disposed of in accordance with applicable local, state and federal regulations.

Handling and Storage Precautions: Use NIOSH/MSHA respirators approved for silica bearing dust when free silica containing airborne bentonite dust levels exceed PEL/TLV's. Clean up spills promptly to avoid making dust. Storage area floors may become slippery if wetted.

VIII. INDUSTRIAL HYGIENE CONTROL MEASURES

Ventilation Requirements: Mechanical, general room ventilation. Use local ventilation to maintain PEL's/TLV's.

Respirator: Use respirators approved by NIOSH/MSHA for silica bearing dust.

Eye Protection: Chemical safety goggles. Use of contact lenses not recommended.

Gloves: As appropriate for industrial work.

Other Protective Clothing or Equipment: As appropriate for industrial work.

IX. SPECIAL PRECAUTIONS

Avoid inhalation of airborne dust.

DEPARTMENT OF TRANSPORTATION INFORMATION

Shipping Name: Common Ground Clay (NOIBN)	Hazard Class: Not Hazardous
Hazardous Substance: None	
Cautionary Labeling: None required	Date Prepared: April 29, 2002