

Free Flow Technologies, Inc.

***** MATERIAL SAFETY DATA SHEET *******Free Flow 100®******* SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION *****

MSDS Name: Free Flow 100 - FS
 Product CAS: None

Company Identification: Free Flow Technologies, Inc.

Address: 9918 N. Alpine Road
 Machesney Park, Illinois 61115

For Information call: 815-636-0166 or 866-677-0166
 Emergency Contact: Mike Slattery

MSDS Effective: 05/01/2008
 Supercedes:

Mix Design Reference: # 21, 22, 23, 24, 25, 26, 27, 28, 29

***** SECTION 2 – COMPOSITION, INFORMATION ON INGREDIENTS *****

<u>Chemical Name</u>	<u>CAS</u>	<u>Approximate % (w/w)</u>
Silicon Dioxide	60676-86-0	5-10
Calcium Oxide	1305-78-8	10-90
Aluminum Oxide – Non-fibrous	1344-28-1	1-5
Sulfur	7704-34-9	15-30
Iron Oxide	1309-37-1	1-5
Ferrous Sulfate	7720-78-7	10-80

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***** SECTION 3 – HAZARDS IDENTIFICATION *****

<u>Hazards Ratings</u>	<u>HMIS</u>
Health	2
Fire	0
Reactivity	1
Special Protection	0

POTENTIAL HEALTH EFFECTS

- Target Organs: Eyes, respiratory passages, skin, digestive tract, liver. Pre-existing respiratory diseases including asthma and emphysema may also be aggravated.
- Eye: May cause irritation/inflammation and tissue damage.
- Skin: May cause irritation to moist skin.
- Ingestion: May cause ulceration to the digestive tract. Larger dosages may cause nausea, vomiting, and diarrhea.
- Inhalation: May cause irritation/inflammation to nasal and upper respiratory passages.

***** SECTION 4 – FIRST AID MEASURES *****

- Eye: Flush eyes with water while lifting lids. Get medical attention.
- Skin: Wash skin with soap and water, remove contaminated clothing and shoes. If irritation develops, get medical attention.
- Ingestion: Dilute with water. Get medical attention.
- Inhalation: Remove to fresh air. If irritation develops, get medical attention.

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***** SECTION 5 – FIRE FIGHTING MEASURES *****

Unusual Fire and Explosion Hazards: Free Flow 100 is noncombustible.

Special Fire Fighting Procedures: Do not use water on adjacent fires. Extinguish adjacent fires with dry chemical or CO2.

Extinguishing Media: N/A
Flash Point: N/A
Flammable Limits: Lower Limit: N/A
Upper Limit: N/A

Autoignition Temperature: N/A

***** SECTION 6– ACCIDENTAL RELEASE MEASURES *****

Disposal: Dispose as a non-hazardous solid waste in accordance with all Local, State and Federal regulations.

Spills/Leaks: Use appropriate protective equipment while using dry cleanup methods (sweep/shovel) which minimize dusting. Reclaim in watertight containers. Small amounts may be flushed with water to drain.

***** SECTION 7– HANDLING AND STORAGE *****

Handling: Swells when wet, may burst containers. Keep eyewash bottles available throughout work area.

Storage: Store away from water, acids and oxidizing reagents.

***** SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION *****

Engineering Controls: Use general and local exhaust to keep dust levels within acceptable limits.

Eyes: Wear tight fitting goggles.

Skin: Wear long sleeves, gloves, and pant cuffs over shoes to minimize skin contact.

Respirators: Use NIOSH approved dust respirator when exposure limits exceeded.

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***** SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES *****

Appearance/Odor:	grayish-green powder. No odor.
pH:	6.0-12.0
Vapor Pressure:	N/A
Vapor Density:	N/A
Evaporation Rate:	N/A
Viscosity:	N/A
Boiling Point:	N/A
Freezing/Melting Point:	N/A
Decomposition Temp.:	N/A
Molecular Formula:	Mixture
Density:	65 – 90 # per cu.ft.

***** SECTION 10 - STABILITY AND REACTIVITY *****

Chemical Stability: Stable, keep dry.

Conditions to Avoid: Extreme temperatures.

Incompatibilities with Other Materials: Free Flow 100® contains calcium oxide and ferrous salts which may react with water, acid or oxidizers to produce sufficient heat to ignite combustible materials.

Hazardous Decomposition Products: Could possibly release minor amounts of irritating fluoride if heated to extreme temperatures.

Hazardous Polymerization: No.

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***** SECTION 11 - TOXICOLOGICAL INFORMATION *****

Toxicological Information:

Component	Formula	% Wt.	CAS	PEL	TLV
Calcium Oxide	CaO	10-90	1305-78-8	5 mg/M3	2 mg/M ³
Silicon Dioxide	SiO ₂	5-10	60676-86-0	0.1 mg/M ³ *	0.1 mg/M ³ *
Aluminum Oxide	Al ₂ O ₃	1-5	1344-28-1	10 mg/M ³ +	10 mg/M ³ +
Sulfur	SO ₃	15-30	7704-34-9	15 mg/M ³ +	10 mg/M ³ +
Iron Oxide	Fe ₂ O ₃	1-5	1309-37-1	15 mg/M ³	5 mg/M ³
Ferrous Sulfate	FeSO ₄ ·H ₂ O	10-80	7720-78-7	1.0 mg/M ³	1.0 mg/M ³ ++

* Respirable Dust

+ 5 mg/M³ as Respirable Fraction

++ Soluble iron salt as Fe

Silicon Dioxide and Iron Oxide are listed by IARC as potential carcinogens.

***** SECTION 12 - ECOLOGICAL INFORMATION *****

Ecological Information: None available

***** SECTION 13 - OTHER PRECAUTIONS *****

Other Precautions: None

***** SECTION 14- TRANSPORT INFORMATION *****

DOT Label No: N/A

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***** SECTION 15 - REGULATORY INFORMATION *****

SARA Title III – Section 311/312 – Hazard Categories:

Fire Hazard – No
Sudden Release of Pressure – No
Reactivity Hazard – Yes
Immediate Health Hazard – Yes
Delayed Health Hazard – Yes

SARA Section 302 Extremely Hazardous Material – none

SARA Section 313 Toxic Chemicals – none

***** SECTION 16 – ADDITIONAL INFORMATION *****

Information herein is based on data believed to be accurate at the time of the preparation. No warranty or representation, express or implied, is made to the accuracy or completeness of the MSDS. No responsibility can be assumed by vendor for any damage or injury resulting from misuse, failure to follow recommended practices, or from any hazards inherent in the nature of the product.