

MATERIAL SAFETY DATA SHEET

Section 1 - PRODUCT / MANUFACTURER'S IDENTIFICATION

PRODUCT NAME: **FreshFlo** EMERGENCY NUMBER: 800-424-9300
MSDS NUMBER: 14053 PRODUCT USE: Acidulant
VERSION NUMBER: 1.9 DOT HAZARD CLASS: 8
ISSUE DATE: 08/19/03 DOT SHIPPING NAME: Corrosive liquid, Acidic, Inorganic, N.O.S.
REVISION DATE: 09/18/06 UN NUMBER: 3264
PREPARED BY: Mionix Corporation PACKAGING GROUP: II
MANUFACTURER: Mionix Corporation
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3	HEALTH	HAZARD RATING 4=EXTREME 3=HIGH 2=MODERATE 1=SLIGHT 0=INSIGNIFICANT
0	FIRE	
2	REACTIVITY	
C	MINIMUM PERSONAL PROTECTION	
A=GOGGLES B=GOGGLES & GLOVES C=GOGGLES, GLOVES, & APRON		

ABBREVIATION KEY: NA= Not Applicable NE = Not Established ND = Not Determined

Section 2 - HAZARDOUS INGREDIENTS INFORMATION

CHEMICAL INDENTITY	HAZARDOUS	CAS REG#	PERCENTAGES
Acidic Calcium Sulfate	Yes	NA	20 - 30
Water	No	7732-18-5	70 - 80

Section 3 - PHYSICAL DATA

BOILING POINT: 104°C - 105°C SPECIFIC GRAVITY (H₂O = 1.0): 1.10 - 1.13 ODOR: Odorless and slightly acidic
PHYSICAL STATE: Liquid APPEARANCE: Clear to slightly cloudy or opaque pH: <1.0
FREEZING POINT: ≈ -5°C

Section 4 - HEALTH HAZARD DATA

Exposure to significant quantities of liquid and/or mist may cause irritation or burns to body tissue. Swallowing of large quantities may be fatal. Harmful if undiluted FreshFlo is inhaled. Excessive heat (>100°C) may cause volatility. Slightly water reactive. Contains strong inorganic acid. Long term exposure to undiluted FreshFlo may increase cancer risk.

POTENTIAL HEALTH EFFECTS

Inhalation: Inhalation of undiluted FreshFlo may produce damaging effects on the mucous membranes and upper respiratory tract. Symptoms may include irritation of the nose and throat. May cause lung edema, a medical emergency.

Skin Contact: Corrosive. Symptoms of redness, pain, and burn can occur by skin contact with undiluted FreshFlo.

Ingestion: Acidic Calcium Sulfate is approved as a food additive, however ingestion of undiluted FreshFlo may cause burns to the mouth, throat, and stomach.

Eye Contact: Contact with undiluted FreshFlo may cause blurred vision, redness, pain and severe tissue burns.

Chronic Exposure: Chronic exposure to mist of the undiluted FreshFlo may increase risk of cancer.

Aggravation of Pre-existing Conditions: Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of undiluted FreshFlo.

Section 5 - FIRST AID MEASURES

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

Section 6 - FIRE FIGHTING MEASURES

Fire: Concentrated material is a strong dehydrating agent. Do not store around unapproved chemicals (see Section 10).

Explosion: A mild exothermic reaction may occur when undiluted FreshFlo is added to water.

Fire Extinguishing Media: Dry chemical, foam or carbon dioxide. Water spray may be used to keep fire exposed containers cool.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Structural firefighter's clothing is ineffective for fires involving this material. Stay away from sealed containers.

Section 7 – ACCIDENTAL RELEASE MEASURES

Ventilate area of leak or spill. Wear appropriate personal protective equipment. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Neutralize with alkaline material (soda ash, lime), then absorb with an inert material (e.g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer. US regulations (CERCLA) require reporting spills and releases to soil, water, and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is 800-424-8802.

Section 8 – HANDLING AND STORAGE

Store in well ventilated storage area. Protect from physical damage. Keep away from incompatible materials. **When diluting, always add FreshFlo to water; never add water to undiluted FreshFlo.**

Section 9 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Airborne Exposure Limits:

For undiluted FreshFlo:

-OSHA Permissible Exposure Unit (PEL): 1mg/m³ (TWA)

-ACGIH Threshold Unit Value (TLV): 1 mg/m³ (TWA), 3 mg/m³ (STEL), A2 - suspected human carcinogen for undiluted FreshFlo contained in strong inorganic acid mists.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Section 10 – STABILITY AND REACTIVITY

Stability: Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products: Reacts with carbonates to generate carbon dioxide gas, and with cyanides and sulfides to form poisonous hydrogen cyanide and hydrogen sulfide respectively.

Hazardous Polymerization: Will not occur.

Incompatibilities: Potassium chlorate, potassium perchlorate, potassium permanganate, sodium, lithium, bases, organic material, halogens, metal acetylides, oxides and hydrides, metals (yields hydrogen gas), strong oxidizing and reducing agents and many other reactive substances.

Conditions to Avoid: Excessive heat (>100°C) and incompatibles.

Section 11 – TOXICOLOGICAL INFORMATION

Toxicological Data: Oral rat LD₅₀: 2140 mg/kg; inhalation rat LC₅₀: 510 mg/m³/2H; standard Draize, eye rabbit, 250 µg (severe); investigated as a tumorigen, mutagen, reproductive effector (0.1N solution).

Carcinogenicity: Cancer Status: The International Agency for Research on Cancer (IARC) has classified "strong inorganic acid mists" as a known human carcinogen, (IARC category 1).

Section 12 – ECOLOGICAL INFORMATION

Environmental Fate: When released into the soil, this undiluted FreshFlo may leach into groundwater. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition. When released into the air, this material may be removed from the atmosphere to a moderate extent by dry deposition.

Environmental Toxicity: This undiluted FreshFlo may be toxic to aquatic life.

Section 13 – DISPOSAL CONSIDERATIONS

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 – TRANSPORTATION

Shipping Name:	Corrosive liquid, Acidic, Inorganic, N.O.S.
Hazard Class:	8
UN Number:	UN3264
Packing Group:	II

Section 15 – REGULATORY INFORMATION

TSCA

CAS# 7664-93-9 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA

Section 313

FreshFlo may contain sulfuric acid (CAS# 7664-93-9, 95 98 0%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

CAS# 7664-93-9 is listed as a Hazardous Substance under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 7664-93-9 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, and Massachusetts.

California No Significant Risk Level: None of the chemicals in this product are listed. European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

C

Section 16 – ADDITIONAL INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Mionix Corporation be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Mionix Corporation has been advised of the possibility of such damages.