

MATERIAL SAFETY DATA SHEET

Item Name: SFP polymeric material, about 40-60% w/w in water
Trade Name/Synonyms: AVAIL® for liquid phosphate fertilizers
Chemical Family: carboxylated polymer

Company's Name: SPECIALTY FERTILIZER PRODUCTS
Company's Address: 11550 Ash, Suite Z20, Leawood, KS 66211

Telephone Number: 888-446-4769

Date MSDS Prepared: September 24, 2007

DOT information: Shipping name: corrosive liquid, n.o.s.

Hazard class: 8

UN Number: 1760

Packaging group: PGIII

Section 1

Chemical identification.

Maleic-itaconic copolymer, ammonium salt, 40-60% w/w solution in water.

Section 2

CAS # 701908-99-8

Section 3

Hazards identification.

Irritating to eyes and skin.

In case of contact with eyes or skin, rinse immediately with plenty of water and seek medical advice.

Personal protective clothing code B (goggles/chemical gloves).

HMS Rating: Health: 2 Fire: 1 Reactivity: 1

Section 4

First aid measures.

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

In case of contact, immediately wash skin with soap and copious amounts of water.

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing difficult, give oxygen.

If swallowed, wash out mouth with water, provided person is conscious. Call a physician.

Wash contaminated clothing before reuse.

Section 5

Fire fighting measures.

Extinguishing media: water spray, carbon dioxide, dry chemical powder or appropriate foam.

Special fire fighting procedures:

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Unusual fire hazards: may emit toxic fumes under fire conditions.

Section 6

Accidental release measures.

Wear respirator, chemical safety goggles, rubber boots, heavy rubber gloves. Spilled material should be carefully wiped up or washed away with water. Ventilate area and wash spill site after material pickup is complete.

Material is slippery when wet.

Section 7

Handling and storage.

Store in a cool dry place away from direct sunlight. Keep tightly sealed. Clean up spills promptly.

Section 8

Exposure controls and personal protection.

Use chemical safety goggles/face shield (eye irritant).

Use compatible chemical-resistant gloves.

Use appropriate respirator if mist is generated.

Safety shower and eyewash need to be accessible.

Mechanical exhaust is required if using in confined space/area.

Do not inhale.

Prevent contact with eyes, skin, clothing.

Wash hands thoroughly after handling.

Section 9

Physical and chemical properties.

Appearance: light yellow liquid with characteristic light odor.

Physical properties:

pH: about 2

Flash point: None

Specific gravity: 1.1-1.3

Freezing Point: 12° F

Section 10

Stability/reactivity information.

Stability: stable at room temperature and pressure.

Incompatible with:

Strong oxidizing agents (including bleach), strong reducing agents, materials incompatible with water, materials incompatible with ammonium salts.

Exposure to excessively high pH may lead to ammonia gas evolution.

Can react with metals to give off hydrogen, heat and/or steam.

Can react with bases and metal oxides with high evolution of heat and/or steam.

Can react with carbonates to give off carbon dioxide, heat and/or steam.

Hazardous decomposition products:

It is believed that carbon dioxide and/or monoxide, and nitrogen oxides may be generated by high-temperature decomposition.

Hazardous polymerization:

Not possible.

Section 11

Toxicological information.

Acute effects.

Causes eye and skin irritation. Irritating to mucous membranes and upper respiratory tract.

Swallowing can cause gastrointestinal disturbance.

Treatment should proceed accounting for the fact that the product has a low pH.

To the best of our knowledge, the chemical, physical and toxicological properties of this material have not been thoroughly investigated.

Toxicity data estimates:

Rate (oral LD-50 estimate): >10 g/kg

Section 12

Ecological data.

Not available at this time.

Section 13

Disposal considerations.

Dissolve or mix with water to make a dilute solution and dispose according to all federal, state and local regulations.

Section 14

Other information.

Information contained herein is believed to be correct, but is not all-inclusive and should be used only as a guide. In no case will we be liable for any damages resulting from handling, or contact with, this material.

AVAIL® FOR LIQUID PHOSPHATE FERTILIZERS

Reduces Phosphate Fixation Season Long
Active Ingredient - Minimum 40% maleic-itaconic copolymer

NOTICE: AVAIL® for LIQUID PHOSPHATE FERTILIZERS is designed to be mixed into liquid phosphate fertilizers (i.e., 10-34-0 and other liquid phosphate fertilizers), to sequester antagonistic metals in the soil in the vicinity of the applied phosphate, reduce tie-up of phosphate, and make phosphate more available to the plant. AVAIL® increases phosphate availability through all stages of plant growth, including the early development period crucial for increasing yield potential. AVAIL® is water soluble, biodegradable, and nontoxic. When undisturbed, AVAIL® for LIQUID PHOSPHATE FERTILIZERS inhibits phosphate fixation throughout the growing season, and may also be used with fall fertilizer applications. DO NOT USE AVAIL® for LIQUID PHOSPHATE FERTILIZERS as a coating on granular phosphate fertilizers. AVAIL® for LIQUID PHOSPHATE FERTILIZERS may be used with liquid phosphate fertilizers designed to be used as pop up fertilizers and other sensitive applications when thoroughly mixed into those fertilizers prior to their application. Read MSDS, and label before use, including but not limited to, "Precautions", "Warnings" and "Warranty/Limitations of Liability". Always wear proper personal protection and follow instructions for treatment and application. Use according to label directions.

AVAIL® FOR LIQUID PHOSPHATE FERTILIZERS IS A NON-PLANT FOOD INGREDIENT,
AND NOT RECOMMENDED FOR USE AS A FERTILIZER SUBSTITUTE.

SOIL TYPES AND CROPS

AVAIL® is designed to reduce fixation of phosphate fertilizers in any soil type and to be used with any crop where phosphate fertilizer is deemed by best management practices to be useful for plant growth and development.

MIXING RATE OF AVAIL® FOR LIQUID PHOSPHATE FERTILIZERS

AVAIL® for LIQUID PHOSPHATE FERTILIZERS is recommended for use at a rate of 0.5% (0.5 gallons of AVAIL® with 99.5 gallons of liquid tank mix). AVAIL® concentration needs to be 0.5% of total tank mix.

MIXING INSTRUCTIONS

To test compatibility of AVAIL® FOR LIQUID PHOSPHATE FERTILIZERS with pesticides, surfactants and other products, a proportional mixture of AVAIL® (Using Mixing Rates stated on the Label), liquid phosphorus fertilizer and the other products to be tested should be mixed in a jar or beaker, prior to adding AVAIL® or liquid phosphate fertilizer containing AVAIL® to an entire tank mix. AVAIL® should only be added to the liquid tank mix after the liquid phosphorus fertilizer has been added.

"316" stainless steel pumps and attachments are recommended.

WARNING

AVAIL® for LIQUID PHOSPHATE FERTILIZERS must be thoroughly mixed into liquid phosphate fertilizers pursuant to the rate stated on this label. FAILURE TO FOLLOW MIXING INSTRUCTIONS COULD CAUSE SEED DAMAGE! DO NOT APPLY AVAIL FOR LIQUID PHOSPHATE FERTILIZERS AS A SEED COATING.

APPLICATION RATES

AVAIL® treated phosphate fertilizer should be applied to the soil in the same manner as phosphate fertilizers without AVAIL®. CAUTION: When using AVAIL®, if different farming methods from those normally used are tried, test strips are recommended until such new methods have been proven to be effective.

PRECAUTIONS

When using AVAIL® always wear safety gear such as masks, and safety glasses. Wear long sleeves, and long pants and use natural or butyl rubber gloves. Apply AVAIL® in well ventilated areas. Due to the possibility of eye and skin irritation, avoid contact. In case of accidental contact with eyes or skin, flush with ample water. If irritation persists, contact a physician. Could be harmful if inhaled or swallowed. Empty containers may contain residue. All label warnings apply to empty container.

Do not contaminate waterways and sewers during cleaning of equipment or disposal of wastes, always adhering to applicable provisions of federal, state, and local laws and regulations. Completely empty contents into application equipment. Dispose of empty container by depositing in sanitary landfills, or as required by law. Do not reuse containers. Observe all Warnings on label. Read the Material Safety Data Sheet prior to use.

FOR AGRICULTURAL, TURF AND HORTICULTURAL USES

**KEEP OUT OF THE REACH OF CHILDREN
DO NOT INHALE OR SWALLOW**

WARRANTY/LIMITATIONS OF LIABILITY

Specialty Fertilizer Products, LLC, warrants this product to conform to the chemical description stated on this label, and is reasonably suited for the purposes stated on this label when used in accordance with directions under normal conditions of use. It is impossible to eliminate all risks inherently associated with this product. Crop injury, ineffectiveness, or other unintended consequences may occur because of other factors such as weather conditions, presence of other substances, manner of use or application. The factors heretofore stated are intended as examples only, and are not exhaustive of factors that may affect the use of this product, or the results obtained. Such factors are beyond the control of Specialty Fertilizer Products, LLC, and should be anticipated by the Buyer and User of this product. By use of this product, Buyer and User acknowledge they are familiar with the product and assume all risks and liability for its use.

This product is covered by U.S. Patents Nos. 6,515,090 and 6,515,092; and methods and uses are covered under U.S. Patents Nos. 6,525,155 and 6,596,831.

CAS NO. 701908-99-8

Made in the USA

Information about this product may be obtained by writing to:
Specialty Fertilizer Products, LLC. • 11550 Ash, Suite 220 • Leawood, KS 66211
P: 888-446-4769 • Email: info@specialtyfertilizer.com

FOR CHEMICAL EMERGENCY
(Spill, Leak, Fire or Accident)
Call INFOTRAC Day or Night 800-535-5053

NET WEIGHT:

Liters	Kilograms	Gallons (US)	Pounds
9.46	11.1	2.5	24.5

Sold According to Volume Measurement





AVAIL[®] for LIQUID Phosphate Fertilizers



AVAIL[®]



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9.46 LITERS/2.5 GALLONS