RAMM
FENCE & STALLS

13150 Airport Hwy | Swanton, OH 43558
800-434-8456 | rammfence.com

Soil Moist

POLYMERS ARENA CONDITIONER

SOIL MOIST™ is a synthetic acrylic copolymer. It is a safe, non-toxic chemical used in several aspects of the Commercial landscape, Nursery and Equestrian industry. SOIL MOIST™ is an effective water management aid. It can reduce arena waterings by approximately 50%.** A particle size distribution has been selected to insure rapid initial uptake of water by a portion of the polymer followed by slower absorption of water by the balance of the polymer. Good initial soaking is required to insure that both the soil and the polymer absorb water. Watering routines should be normal for five to seven days. Reductions and watering rates can then be established. From the initial soaking, the polymer will soften and swell. As the soil starts to dry, the polymer will release its water reservoir. As an added benefit, the continuous expansion and contraction of the polymer reduces soil compaction.

BENEFITS:

- Reduces Arena watering by approximately 50%. **
- Controls dust - by keeping the arena moisture level higher.
- Improves riding surface - with the expansion and retraction of the polymer it reduces soil compaction.
- Adds cushion to the riding surface.
- Lasts several seasons in the soil.**
- Cost effective.
- Environmentally friendly

Sample Test: To see how Soil Moist will amend your arena soil:

1. Place the contents of the sample package (1/2 oz., 2-4 mm particle size) in one quart (32 ounces) of water.
2. Allow the Soil Moist polymer to stay in the water up to one hour until the water is fully absorbed.
3. Place two five (5) quart containers of your arena soil side by side.
4. In one container place the entire contents of the hydrated Soil Moist in the soil and mix well.
5. In the second container pour one quart (32 ounces) of water.
6. Mix both products well in the arena soil.
7. Compare the texture and difference of the soils.

The container with Soil Moist will not dry out as fast as the untreated soil and keep your arena moisture level higher.

See Reverse Side for Applications

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APPLICATIONS:

Prior to any application, the arena soil should be rototilled, harrowed or disked to break up the arena surface at least 3-4 inches in depth.

Depending upon the type of arena soil, Soil Moist (2-4 mm) should be applied at the following rates:

INDOOR ARENA:

Type of Soil	Depth	Amount per 1,000 sq. ft.
Sand	Minimum 3"	12 lbs.
Sand	3 - 4"	12 - 14 lbs.
Heavy Clay	3"	12 - 14 lbs.
Heavy Clay	4"	14 - 16 lbs.

OUTDOOR ARENA:

Type of Soil	Depth	Amount per 1,000 sq. ft.
Sand	Minimum 3"	14 lbs.
Sand	4 - 5"	14 - 16 lbs.
Heavy Clay	Minimum 3"	14 lbs.
Heavy Clay	4 - 5"	16 - 17 lbs.

DO NOT USE SOIL MOIST ARENA CONDITIONER IF CALCIUM CHLORIDE OR OTHER CHEMICALS HAVE BEEN APPLIED

If wood chips and shavings are present, use the application rate for sand.

Broadcast the polymer (2-4 mm particle size) with a spreader or drop seeder for even disbursement. To ensure even disbursement, plot out 1000 square feet (25' x 40' or any measurement to equal 1000 square feet). Set the spreader or drop seeder opening at the smallest setting. Fill the seeder or spreader with the appropriate amount for 1000 square feet. Broadcast the polymer in the plot. If too much polymer is left in the hopper after the first pass applying the polymer, make proper adjustments to ensure all product is dispersed.

Work the polymer into the arena at the desired depth using a rototiller, harrow or disk. If a harrow is used, the spacing between the tines should be a minimum of six inches. If necessary, remove every other tine. **NOTE:** Apply up to two pounds more of the Soil Moist per 1000 square feet where heavy traffic occurs in the arena (outer ring of arena etc.). Water liberally, water routine should be normal for five to seven days. Water rates and reductions can then be established. **SOIL MOIST MUST BE WORKED INTO THE ARENA AT THE ABOVE DEPTHS TO BE EFFECTIVE.** If left on the surface, UV light will break the polymer down. Salt content of the water and the pH of the arena affect the absorption capacity of the polymer. If the pH of the arena soil is above 8.0 or if calcium chloride has been recently applied, contact the factory for specific application rates.

**** Results may vary depending on soil conditions such as amount of salt, pH, microorganisms, other chemicals and product application depth.**

Should you need additional information on Soil Moist Arena Conditioner or the horticultural applications, please contact:

RAMM Fence & Stalls | 13150 Airport Highway | Swanton, Ohio 43558-9615
1-800-434-8456 | Fax: (419) 825-2433
E-mail: ramm@rammfence.com

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY

Product name: SOIL MOIST ™

Company: RAMM FENCE & STALLS
13150 AIRPORT HIGHWAY
SWANTON, OH 43558-9615

Telephone: 419-825-4255

Fax: 419-825-2433

E-mail: ramm@rammfence.com

Emergency: 800-434-8456

Product Use: product aid in commercial applications.

2. HAZARDS IDENTIFICATION

Appearance and Odor:

Form: Granular solid

Color: White

Odor: None

Potential Health Effects:
None. See Section 11 for more information.

Potential Physical/Chemical Effects:
The product swells in water. The product when wet renders surfaces extremely slippery.

OSHA Regulatory Status:
This material is not considered hazardous in accordance with OSHA 29 CFR 1910.1200.

Potential Environmental Effects:
None. See Section 12 for more information.

Other information: No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Identification:

Cross linked polymer

Regulated Components:

None

4. FIRST AID MEASURES

Inhalation: Move to fresh air.

Skin contact: Wash with water and soap as a precaution. Get medical attention if irritation develops and persists.

Eye contact: Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention.

Ingestion: Rinse mouth with water. Do not induce vomiting.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media: Water. Water spray. Foam. Dry powder. Carbon dioxide (CO2).

Unsuitable extinguishing media: None.

Precautions: The product swells in water The product when wet renders surfaces extremely slippery

Special protective equipment for firefighters: No special protective equipment required.

Specific methods: Keep personnel removed and upwind of fire.

Specific hazards: In the event of fire the following can be released: Nitrogen Oxides. Carbon Oxides.

Flash point (°C): Not applicable.

Auto ignition temperature (°C): Not applicable.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: No special precautions required. The product swells in water. The product when wet renders surfaces extremely slippery

Environmental precautions: As with all chemical products, do not flush into surface water.

Methods for cleaning up: Do not flush with water. Clean up promptly by sweeping or vacuum Keep in suitable and closed containers for disposal. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin and eyes. Avoid dust formation. Do not breathe dust. Wash hands **before breaks and at the end of workday.**

Storage: Keep in a dry, cool and well-ventilated place. The recommended storage temperature is 5-30 °C.

Technical measures/Precautions: No special precautions required.

Incompatible products: Strong oxidizing agents. Acids.

Technical measures/Storage conditions: No special storage conditions required.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits:
None.

Engineering measures: Use local exhaust if dusting occurs. Natural ventilation is adequate in absence of dusts.

Personal protective equipment:

Respiratory protection: Dust safety masks are recommended where concentration of total dust is more than 10 mg/m3.

Hand protection: PVC or other plastic material gloves.

Eye protection: Safety glasses with side-shields. Do not wear contact lenses where this product is used.

Skin and body protection: Chemical resistant apron or protective suit if splashing or repeated contact with solution is likely.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Granular solid
Color:	White
Odor:	None
pH:	5 - 8 @ 5 g/L
Melting point/range (°C):	> 150°C
Flash point (°C):	Not applicable.
Boiling point (°C):	Not applicable
Auto ignition temperature (°C):	Not applicable.
Vapor pressure (mm Hg):	Not applicable
Approx. bulk density:	0.6 - 0.9
Viscosity (mPa.s):	See Technical Bulletin
Water solubility:	Insoluble
LogPow:	-2

10. STABILITY AND REACTIVITY

Stability: Stable. Hazardous polymerization does not occur.

Materials to avoid: Strong oxidizing agents. Strong acids. Oxidizing agents may cause exothermic reactions.

Hazardous decomposition products: Thermal decomposition may produce: nitrogen oxides (NOx), carbon oxides (COx). Hydrogen cyanide (hydrocyanic acid).

11. TOXICOLOGICAL INFORMATION

Product Information

Acute toxicity:

Oral: LD50/oral/rat > 5000 mg/kg

Dermal: LD50/dermal/rat > 5000 mg/kg

Inhalation: The product is not expected to be toxic by inhalation.

Irritation:

Skin: Not irritating.

Eyes: Not irritating. Sensitization: Not sensitizing. Mutagenicity: Not mutagenic.

Carcinogenicity: Not carcinogenic.

Reproductive effects: Not toxic for reproduction.

Chronic toxicity: No chronic effects.

12. ECOLOGICAL INFORMATION

Product Information

Aquatic toxicity:

Toxicity to fish: LC50/Danio rerio/96 hours > 100 mg/L (OECD 203)

Toxicity to daphnia: EC50/Daphnia magna/48 hours > 100 mg/L (OECD 202) Toxicity to algae: IC50/ Scenedesmus subspicatus/72 hours > 100 mg/L (OECD 201) Environmental fate:

Persistence and degradability: Not readily biodegradable.

Hydrolysis: Does not hydrolyze. Bioaccumulation: Does not bioaccumulate. LogPow: -2

LogKow: Not determined.

13. DISPOSAL CONSIDERATIONS

Disposal: Dispose of in accordance with local, state and federal regulations.

Container: Rinse empty containers with water and use the rinse water to prepare the working solution. Can be landfilled or incinerated, when in compliance with local, state and federal regulations.

14. TRANSPORT INFORMATION

DOT:
Not classified as dangerous in the meaning of DOT regulations.

IMDG/IMO:
Not classified as dangerous in the meaning of IMO/IMDG regulations.

ICAO/IATA:
Not classified as dangerous in the meaning of ICAO/IATA regulations.

15. REGULATORY INFORMATION

Product Information

US SARA Reporting Requirements: None.

RCRA status: Not RCRA hazardous.

SARA (Section 311/312) hazard class: Not concerned.

International Inventories:

USA (TSCA): All components of this product are either listed on the inventory or are exempt from listing.

China (IECSC): All components of this product are either listed on the inventory or are exempt from listing.

European Union (REACH): All components of this product have been registered or pre-registered with the European Chemicals Agency or are exempt from registration.

Australia (AICS): All components of this product are either listed on the inventory or are exempt from listing. Japan (ENCS): All components of this product are either listed on the inventory or are exempt from listing. Korea (ECL): Status not yet confirmed. For Research & Development purposes only.

Philippines (PICCS): Status not yet confirmed. For Research & Development purposes only

Taiwan (CSNN): All components of this product are either listed on the inventory or are exempt from listing.

New Zealand (NZIoC): All components of this product are either listed on the inventory or are exempt from listing.

16. OTHER INFORMATION

NFPA and HMIS Ratings:

NFPA:

Health:	1
Flammability:	1
Instability:	0

HMIS:

Health:	1
Flammability:	1
Physical Hazard:	0
PPE Code:	B

This MSDS was prepared in accordance with the following:

ISO 11014-1: Material Safety Data Sheet for Chemical Products

ANSI Z400.1-2004; Material Safety Data Sheets - Preparation

Revision Number: 015A

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.