



NUTRIMOIST®L



NUTRIMOIST® L is a soil additive that captures and retains water and nutrients

- Incorporated into soils or growing media, **NUTRIMOIST L** aids in optimal plant growth with minimal losses of water and nutrients through leaching and evaporation

- Water and soluble nutrients are stored in the root zone for uptake by the plant

NUTRIMOIST L is formulated with Stocksorb® (hydrogel) and nutrient hydration reagent. This product was developed expressly for liquid injection of cross linked (hydrogel) polymer into turf.



The injection of Nutrimoist® L into soil is accomplished using the revolutionary M216 Polymer Injection Machine developed and patented by American Soil Technologies, Inc. The M216 injects Nutrimoist® L under pressure directly into the root

zone of the turf or other plant where the hydrogel contained in Nutrimoist® L “time releases” its absorbed nutrients and moisture. The process of hydration and rehydration of the hydrogel contained in Nutrimoist® L continues for several years providing, among other benefits, increased moisture and nutrient availability to the turf.

Virtually all the moisture and nutrients contained in Nutrimoist® L are released to the soil and become available to the root mass of turf well before permanent wilt point. The increased “plant available” moisture resulting from application of Nutrimoist® L reduces the frequency of required water scheduling and the potential for plant stress during periods of relatively high temperature. Nutrimoist® L maximizes root growth and turf quality by providing constant soil moisture where the turf needs moisture most, in the root zone.

Water and nutrient elements can be taken up directly by the fine root hairs of the turf by growing into the gel or they can be taken up indirectly by slow release from the hydrogel to the surrounding soil by osmotic processes. Stocksorb® hydrogel is not able to withdraw water from plants; therefore, there is no competition between the hydrogel and plants for available moisture.

Due to the swelling of the hydrogel crystals (up to 200 x weight) during water uptake, the soil volume changes **resulting in reduced soil compaction and improved soil porosity and permeability.** By

“loosening” the soil, root growth is enhanced.

Available Water and Unavailable Water – Water held between field capacity (the amount of water remaining in the soil after the large soil pores have drained) and permanent wilt point (PWP) is termed “available” water. Water remaining after PWP is termed “unavailable” water. The soil is said to be at permanent wilting point when plants can no longer exert enough force to extract soil water. This point varies as a result of soil type and plant specie. For instance, a sandy soil with 10% moisture may be at field capacity, while loam soil at 10% moisture may be near PWP. This is due to differences in surface attraction for water (matric potential) between different soil particles. Clay soil particles have a much higher surface energy level (CEC) than sand particles and, as a result, clay soil at field capacity can hold approximately 3.9 inches of water per foot compared to 1.1 inches per foot for sand.

There is, however, give and take in this relationship. Because sand has a relatively low surface energy, approximately 55% of water held in sand at field capacity is available to the plant. However, in clay soil, only about 28% of water held at field capacity is available to the plant.

More ideal soil types in terms of water retention and plant growth for most plants include sandy and silt loams. At field capacity, nearly 70% of the soil water held by these soil types is available to most plants.

Through the addition of the hydrogel contained in Nutrimoist® L, the properties of a sandy soil, with regards to water retention capacity and water release potential, can change to those of a silty loam soil. In sum, the addition of Nutrimoist® L to soil can significantly improve soil texture and water retention capacity. This equates to improved plant vitality and root structure.

Product Handling

Keep Nutrimoist® L dry. Direct contact with moisture, while terrific when the product is in the ground, can cause problems during transport or storage. Store the product in a cool dry place until application and be mindful that, at the time of application, Nutrimoist L must be mixed with water in strict accordance with the manufacturer’s instruction. After the product is properly mixed with water, only light agitation is required to keep the product in solution. Nutrimoist L is classified as a mild irritant, so wear gloves and protective eyewear. Nose and mouth protection is also recommended.

Environmentally Friendly
Nutrimoist L has a positive environmental profile, due to a few key characteristics. The major component of Nutrimoist L is its hydrogel crystals. With an essentially neutral pH, they break down into base component parts of ammonia, carbon dioxide, and water with no residual toxicity. Laboratory tests prove that the Stockorb® hydrogel contained in Nutrimoist L is non-toxic to plants, birds, fish, animals, and soil organisms. Unlike sodium-based hydrogel contained in many

soil amendment products, the potassium-based hydro.gel contained in Nutrimoist L will not add unwanted salinity levels to the soil.

Note: For a complete environmental profile, consult the product label or contact an American Soil Technologies sales representative.

Application Rate

Nutrimoist® L is applied at a rate of 150 gallons per acre after the product is placed in solution in water. This equates to approximately 30 pounds of hydrogel per acre. In applications with reasonably good irrigation water quality, this application rate will place sufficient Nutrimoist® L to store 3,000 pounds or more “available” water per acre and muscle in the equivalent of 400 cubic feet or more of soil pore space in the top 1 ½” of the soil.

Summary

Nutrimoist® L can increase the ability of soil to hold water, reduce nutrient leaching, and improve the soil profile.

For more information contact:

American Soil Technologies, Inc.
12224 Montague Street
Pacoima, CA 91331
Tel: 818-899-4686
www.americansoiltech.com