# SmartSoil Hydrogel



SmartSoil Hydrogel is an ECOLOGICALLY SAFE soil additive, which can

Immediately and significantly reduce the water resource consumption by decreasing the surface runoff.

Immediately and significantly reduce the water resource consumption by decreasing the irrigation demand down to h of sustainable irrigation rates. Help clean, protect, and rejuvenate the soil.

Provide plant / vegetation support.

SmartSoil Hydrogel is a "smart"-polymer technology, designed as a RESOURCE CONSERVATION SYSTEM, to help avoid, minimize, and remedy the human impact on NATURAL SOIL and WATER RESOURCES

Product: SmartSoil Hydrogel

Soil conditioning agent. Soil stabilizing agent. Water-soluble hydrogel.

#### Product, Operations and Technology

### SmartSoil Hydrogel: COMPOSITION

polymer (PAM) hydrogel, enriched with 16 components

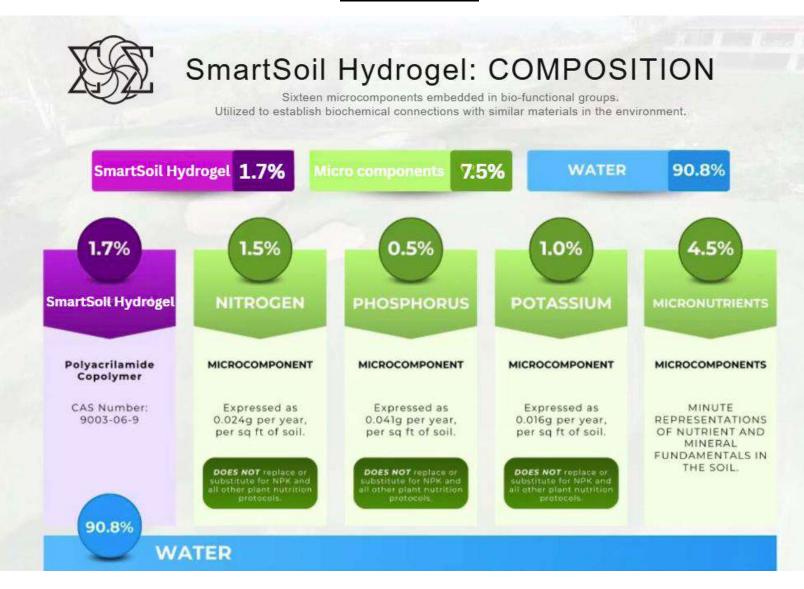
SmartSoil Hydrogel ..... 1.7%

MICROCOMPONENTS ...... 7.5%

WATER ...... 90.8%



### **Formulation**



All micronutrients are added into the polymer synthesizing process and act like a teacher that teaches the polymer to look out for these nutrients throughout its lifespan. The polymer then tries to hold these nutrients into the layer where it resides and acts like a targeted nutrient delivery system for the plants.

## **Operations:**

WATER CONSERVATION: Surface Runoff Reduction, In-Ground /Residual Fertilizer Utilization, Irrigation Water Reduction, Rainwater Consumption

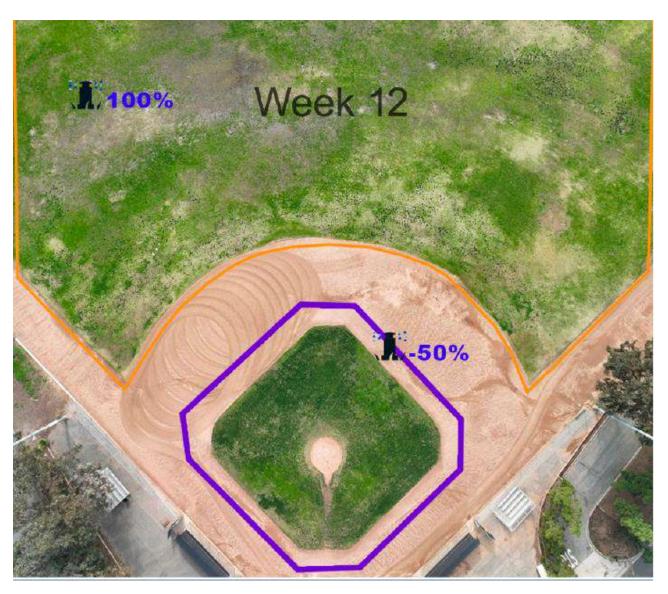
The **TEST** field below is housing the DEL TAPLAN Soil System technology, and had the irrigation reduced by 50% starting with week 2, after the integration.



**IRRIGATION:** The SmartSoil Hydrogel displays the ability to support the vegetation a t½ of sustainable irrigation rate (weeks 2-7).

INCREASE AND IMPROVEMENT IN GREEN MASS: While no additional fertilizers were applied to the soil in the 12-week period, the DELTAPLAN Soil System displays the capacity to utilize the residual nutrition found in the soil from prior feeding protocols.

**RAINWATER RETENTION:** Weeks 8-12 display the DELTAPLAN Soil System's capacity to retain and utilize the rainwater at a higher rate and quality.



The image displays a comparison between the CONTROL field with no SmartSoil Hydrogel technology, receiving 100% irrigation and TEST field, housing the SmartSoil Hydrogel technology with 50% reduction in irrigation.

#### **CONTROLED AND REGULATED WATER AND NUTRIENT DELIVERY SYSTEM**



The image displays a comparison between the *ROOT SYSTEM* development in *CONTROL* field with no SmartSoil Hydrogel technology, receiving 100% irrigation and *TEST* field, housing the *SmartSoil Hydrogel* technology with 57% reduction in irrigation.

Observation period: 10 days after integration.

SmartSoil Hydrogel: Product Information

Similar tests and observations can be duplicated in any environment with controlled

irrigation settings, with observable and measurable results, starting with week 2, post

integration.

**ECOLOGICAL FOOTPRINT** 

DELTAPLAN Soil System is ecologically clean, biodegradable, paraben, dye, and

phthalate-free. No animal testing. No plant-derived components. No animal-derived

components.

No new, previously unknown, unsafe, artificial ingredients and components exist in

Deltaplan Polymer Systems' formulations, developments, and products.

Developed, produced, licensed, and manufactured by:

Deltaplan, Inc. USA

Additional information can be obtained through our website.

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