



Foliar-Pak[®]

2019 Product Catalog

MORE THAN NUTRIENTS
**WE PROVIDE
SOLUTIONS.**



Foliar-Pak®



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Foundation Forty

4-0-8 Amino Acid Concentrate

PRODUCT DESCRIPTION/BENEFITS

Foliar-Pak Foundation Forty is a highly concentrated, engineered blend of specific amino acids for increased nitrogen fixation, chlorophyll production, energy production, and the production of anti-stress compounds.

Better Stress Tolerance

With 40% free amino acids, Foliar-Pak Foundation Forty provides the amino acid inputs necessary to increase production of key anti-stress osmolytes such as gamma-aminobutyric acid and proline, which are loaded into the vacuole of the plant. Plants depend on these osmolytes to regulate water storage under drought, salt, and cold temperature stress.

Better Plant Energy

Foliar-Pak Foundation Forty supplies specific amino acids that work to increase nitrogen fixation, chlorophyll production, and carbon fixation, three essential plant functions that directly impact plant energy. This leads to better production and storage of carbohydrates allowing the plant to build energy reserves which it can draw upon in times of need.

Improved Uptake and Utilization

Foliar-Pak Foundation Forty facilitates greater uptake of nutrients and chemicals in two ways: by directly complexing and moving them through transcuticular pores or by loading metabolites into the stomatal guard cells. This flexes those pores open allowing easier entry and resulting in better performance of many tank-mix chemistries.

GUARANTEED ANALYSIS

Total Nitrogen (N) 4.0%
 4.0% Other Water Soluble Nitrogen
 Soluble Potash (K₂O)..... 8.0%

Derived from: soy protein hydrolysate, potassium acetate

PRODUCT INFORMATION:

Weight per Gallon: 12.4 lbs
 pH: 10.2

GENERAL USE GUIDE

This product is tank mix compatible with most fertilizers and pesticides. However, due to variability in water sources and pesticide formulations a compatibility test is recommended. For foliar applications delay irrigation or mowing for 12 to 24 hours.

<p>Golf Course Greens and Tees</p>	<p>Maintenance Applications: Apply 0.5 to 1.5 fl oz per 1000 sq ft every 7 to 14 days. Turf Recovery or Intense Stress: Apply 1.5 to 3.0 fl oz per 1000 sq ft every 7 to 14 days until turf sufficiently recovers.</p>
<p>Fairways Sports Turf</p>	<p>Apply 0.5 to 1.5 fl oz per 1000 sq ft. Tank mix with other fertilizers and pesticides for increased absorption and better turf health. Repeat applications every 14 to 28 days.</p>
<p>Professional Lawn Care</p>	<p>Apply 0.5 to 1.5 fl oz per 1000 sq ft. Tank mix with other fertilizers and pesticides for increased absorption and better turf health. Repeat applications every 30 to 45 days.</p>





“ After learning how Foundation Forty is formulated with specific amino acids that lead to a variety of positive plant responses, I decided to give it a try. And what I found was better rooting, density, and color on our greens, tees and approaches. With low use rates and easy mixing, Foundation Forty has found a spot in our program.

Keith Wood, Golf Course Superintendent
Quail Hollow Club | Charlotte, North Carolina

CSi L

2-0-0 with 25% Si

PRODUCT DESCRIPTION/BENEFITS

Foliar-Pak CSi L is one of the most concentrated liquid silicon products in the market at 25% SiO₂ by weight. It is derived from silicic acid, and forms a low molecular weight silica polymer.

- Foliar-Pak CSi L is paired with a specific amino acid that acts as an osmolyte in the plant—which helps keep water in the cell, creating optimal turgor pressure and rigidity in the turf.
- With the silicon, Foliar-Pak CSi L will improve plant tolerance to biotic and abiotic stress by producing stronger cell walls, thicker cuticles and reducing evapotranspiration.
- Unlike other silicon products on the market, Foliar-Pak CSi L is tank-mix compatible with a variety of other products as it is built to not interact with other molecules in the spray tank.
- Owing to its small molecular weight and size, Foliar-Pak CSi L moves through the foliage very easily, unlike other silicon products such as silicates and slags that are not soluble, and therefore are not readily available for plant uptake and use.
- Silicon delivered from Foliar-Pak CSi L will increase plant turgidity, resulting in more upright growth, smoother surfaces, better green speed and better wear tolerance.

GUARANTEED ANALYSIS

Total Nitrogen (N) 2.0%
2.0% Other Water Soluble Nitrogen

Derived from: soy protein hydrolysate

NON PLANT FOOD INGREDIENTS

Silicon Dioxide (SiO₂) 25.0%

Derived from: colloidal silica

PRODUCT INFORMATION:

Weight per Gallon: 10.2 lbs (4.86kg)

pH: 8.5

AMINOPRECISE®

AminoPrecise® is a proprietary formulation technology used to create Foliar-Pak's new amino acid products.

Using specific amino acids in chemical reactions with each individual nutrient, we can maximize the protection, solubility, entry into the plant, and movement through the plant's vascular system for each different nutrient-amino-acid compound. When soil tests—like our Soil Solver® diagnostic program—identify specific nutrient deficiencies, AminoPrecise products offer precise solutions.

GENERAL USE GUIDE

This product is tank mix compatible with most fertilizers and pesticides. However, due to variability in water sources and pesticide formulations a compatibility test is recommended.

**Golf Course Greens,
Tees and Fairways
Athletic Fields**

Apply 0.5 to 2.0 fl oz per 1000 sq ft in enough water to provide sufficient foliar coverage.

Repeat application every 7 to 21 days.

Warm season turf may require more frequent applications.

foliar

soil





“ When I began working at my course, we were using several nitrogen-based products that offered a quick release and color, but the effects only remained for 6 or 7 days. After I started implementing Foliar-Pak products with Foundation Forty into the mix, the effects lasted much longer. My course received 14 to 15 days of good turf quality and response. However, the effects of Foundation Forty did not stop there. On one of my fairways, I sprayed Xemplar with Foundation Forty. My course remained disease resistant for 24 days. It was easy to realize I had made the right decision.

Andrew Rhorer, Golf Course Superintendent
Boone's Trace National Golf Club | Richmond, Kentucky



“ Managing healthy putting greens is challenging, especially while trying to maintain fast green speeds. I depend on Foliar-Pak amino acid formulations because they improve plant health while allowing me to limit nitrogen inputs. Foliar-Pak has a great combination of soil and foliar products that have become the cornerstone of my fertility program. The product line has allowed me to formulate a great fertility program that works for all my playing surfaces.

Paul B. Latshaw, Director of Grounds Operation
Merion Golf Club | Ardmore, Pennsylvania

Tournaments hosted:

2004-2016 The Memorial Tournament, Muirfield Village Golf Club, Dublin, OH
2003 PGA Championship, Oak Hill Country Club, Rochester, NY
2013 Presidents Cup, Muirfield Village Golf Club Dublin, OH

Products used:

Foliar-Pak Foundation Forty
Foliar-Pak 1-0-15
Foliar-Pak Manganese
Foliar-Pak Armament K
Foliar-Pak Armament MKS
Foliar-Pak Carbosential Fe
Foliar-Pak CSI L

Gold Standard 45

10-0-0

PRODUCT DESCRIPTION/BENEFITS

Foliar-Pak Gold Standard is a 45% phosphite product completely complexed with amino acids. By leveraging the strengths of amino acids, we created a molecule that is more water soluble than any of the current phosphites on the market, allowing for a highly concentrated, low-use rate product.

- An increase in solubility helps it move into the plant more easily (either through the foliage or through the roots).
- The product has a lower soluble salt content than other phosphites on the market. Creating a low-molecular weight complex with amino acids means an efficient molecule that's not weighed down by an excessive amount of potassium, ammonium, or urea.
- The total amino acid content is approximately 40.5% by weight.
- The amino acids used in the formulation are quickly metabolized and converted into valuable defense structures. They convert to anti-oxidants, compounds sequestering cell-damaging oxygen-free radicals, stress messaging molecules, membrane stabilizing molecules, and they improve DNA replication. In essence they work in synergy with phosphites to enhance the systemic acquired resistance (SAR) response in plants.
- The amino acid structures utilized are rapidly metabolized into key osmolyte molecules (choline and glycine betaine), ensuring the vacuoles remain full in plant cells. This ensures optimal turgor pressure on cell walls, which in turn maximizes turf viability.
- In addition to helping maintain turgor pressure, the amino acids combine with phosphate to form phospholipid membranes in plant cell walls. This helps the plant build stronger cells more rapidly.

GUARANTEED ANALYSIS

Total Nitrogen (N) 10.0%
 10.0% Other Water Soluble Nitrogen

Derived from: L-argininium phosphite

PRODUCT INFORMATION:

Weight per Gallon: 11.2 lbs (5.1 kg)
 pH: 4.0

AMINOPRECISE®

AminoPrecise® is a proprietary formulation technology used to create Foliar-Pak's new amino acid products. Using specific amino acids in chemical reactions with each individual nutrient, we can maximize the protection, solubility, entry into the plant, and movement through the plant's vascular system for each different nutrient-amino-acid compound. When soil tests—like our Soil Solver® diagnostic program—identify specific nutrient deficiencies, AminoPrecise products offer precise solutions.

GENERAL USE GUIDE

This product is tank mix compatible with most fertilizers and pesticides. However, due to variability in water sources and pesticide formulations a compatibility test is recommended.

Golf Course Greens, Tees, Fairways Sports Turf Lawns

Apply 0.5 to 2.0 fl oz per 1000 sq ft in enough water to provide sufficient foliar coverage. Repeat every 7 to 21 days or as needed.

Ornamentals

Use 64.0 to 128.0 fl oz per 100 gallons of water.
Bedding Plants and Hanging Baskets:
 Drench 1 gal of finished solution per 20 sq ft of planted area (do not treat the general bed space). Treat each annual plant as if it covers 1 sq ft. For optimum results, fertilize every 2 weeks.
Shrubs and Trees:
 Drench 1 gal of finished solution per 1" diameter of tree or shrub. In areas where turf is present, inject the solution into the soil.

foliar

soil





“ The first 8 to 12 weeks of the season are easy. But when the mid-summer stress, heat, and drought kick in, that’s where Foliar-Pak can help. With Microsync and Armament Concentrate, grass continues to green up and hold its color later into the season. They also mix in the spray tank with weed control and pre-emergent. Customer complaints about burnout and weed problems are basically nonexistent.

Dave Woehler, Lawn Care Business Operator
Woehler Landscaping | Pittsburgh, Pennsylvania

Armament® Concentrate

0-0-9 protected by Armament®

PRODUCT DESCRIPTION/BENEFITS

Foliar-Pak Armament Concentrate keeps nutrients in suspension, preventing interactions in the spray tank and improving nutrient availability.

Armament technology is a patented, biodegradable nutrient enhancer. This high-molecular weight structure holds a large population of negative charges. These negative charges gently complex positively charged metals, keeping them in solution.

Apply Foliar-Pak Armament Concentrate with routine fertilizer applications for deeper, stronger roots, more resilient turf and longer lasting color.

- Foliar-Pak Armament Concentrate increases nutrient uptake and ensures predictable nutrient availability.
- Foliar-Pak Armament Concentrate unlocks the tied-up nutrients that already exist in the soil, turning them into plant usable nutrition.
- Armament technology prevents nutrient-to-nutrient interactions and chemical changes in the spray tank and the soil.
- Completely biodegradable and will not accumulate in the environment.
- Acting as a buffer, Foliar-Pak Armament Concentrate can be used in high pH and hard water.

GUARANTEED ANALYSIS

Soluble Potash (K₂O)..... 9.0%

Derived from: potassium acetate

PRODUCT INFORMATION:

Weight per Gallon at 68°: 10.6 lbs (4.8 kg)
pH: 7.2

GENERAL USE GUIDE

This product is tank mix compatible with most fertilizers and pesticides. However, due to variability in water sources and pesticide formulations a compatibility test is recommended.

Sports Turf Lawns

Cool Season Turf: For optimal results apply a total of 40-60 fl oz per acre per season using any desired number of applications.

Warm Season Turf: For optimal results apply a total of 60-80 fl oz per acre per season using any desired number of applications.

May be tank mixed with other soil applied products. Dries safely on the leaf surface, but for best results water into soil profile as soon as possible.

Ornamentals

Mix 16 to 32 fl oz in 100 gal of water. Spray to the point of runoff or drench into soil.

foliar

soil



Colonise[®] Bio

2-0-0 with Armament[®], AminoPrecise[®], and Colonise[®]

PRODUCT DESCRIPTION/BENEFITS

Foliar-Pak Colonise Bio is a highly specific blend of eight microorganisms, microbe food and nutrient enhancers. Colonise Bio is enhanced with Armament, AminoPrecise and Colonise technologies to target better nutrient uptake, plant resilience, rooting and turf playability.

- Contains nitrogen-fixing bacteria to convert air and soil-locked nitrogen into nutrients.
- Specific amino acids work to help the plants create stronger roots, more chlorophyll and anti-stress compounds.
- Encourages healthier, stronger, more resilient growth. Helps to better defend plants against insects, disease, environmental stresses and turf playability.
- Better playability and quicker recovery due to improved nutrient uptake and cellular water retention.

AMINOPRECISE[®]

AminoPrecise[®] is a proprietary formulation technology used to create Foliar-Pak's new amino acid products. Using specific amino acids in chemical reactions with each individual nutrient, we can maximize the protection, solubility, entry into the plant, and movement through the plant's vascular system for each different nutrient-amino-acid compound. When soil tests—like our Soil Solver[®] diagnostic program—identify specific nutrient deficiencies, AminoPrecise products offer precise solutions.

GUARANTEED ANALYSIS

Total Nitrogen (N) 2.0%
2.0% Other Water Soluble Nitrogen

Derived from: soy protein hydrolysate

NON PLANT FOOD INGREDIENTS

Polymer 13%
Black Strap Molasses 10%
(Microbe Food)
Seaweed Extract 2.5%
(Derived from Ascophyllum nodosum (microbe food))
Humic Acid 1.5%
(Derived from Leonardite)
Vitamin B-1 0.2%
(Thiamine Hydrochloride)
Total Other Inert Ingredients 72.8%

(1) BACTERIA: Bacillus licheniformis: 1,100,000 cfu/ml; Bacillus pasteurii: 1,100,000 cfu/ml; Bacillus subtilis: 1,100,000 cfu/ml; Paenibacillus azotofixans: 1,100,000 cfu/ml

(2) ENDO MYCORRHIZAE: Glomus intraradices: 1.1 prop/ml; Glomus mosseae: 1.1 prop/ml; Glomus aggregatum: 1.1 prop/ml; Glomus monosporum: 0.055 prop/ml; Gigaspora margarita: 0.055 prop/ml

(3) ECTO MYCORRHIZAE: Rhizopogon luteolus: 57,400 prop/ml; Pisolithus tinctorius: 343,750 prop/ml; Laccaria bicolor: 22,962 prop/ml; Laccaria laccata: 22,962 prop/ml

PRODUCT INFORMATION:

Weight per Gallon: 9.8 lbs (4.45 kg)
pH: 7.2

GENERAL USE GUIDE

This product is tank mix compatible with most fertilizers and pesticides. However, due to variability in water sources and pesticide formulations a compatibility test is recommended. Shake well.

Golf Course Greens and Tees

Apply 6.0 fl oz per 1,000 ft sq in enough water to provide sufficient foliar coverage. Reapply monthly at 3.0 fl oz per 1,000 ft sq during the growing season.

Golf Course Fairways

Apply 3.0 fl oz per 1,000 ft sq monthly during the growing season.

foliar

soil

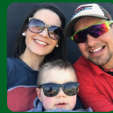




Don't just take our word for it.



Finally some sun and warm weather. Aerification on wear areas, nice little topdressing and getting in a little EnP Foliar-Pak on top. Thanks @matthewjcarver9 you can already see this stuff working.



Andrew Tallent

@TallentTurf · 6/1/18

Head Groundskeeper, Hickory Crawdads



Hampton Sydney College Baseball field looking amazing with Foliar Pak Foundation 40, Micros Plus, and Armament Concentrate. Applied 8 days ago and looking great. #FoliarPak #InnovativeTurfServices



Stephen Hansen

@Stephen ITSwest · 2/28/18

Territory Manager, Innovative Turf Services



First app of "Grow in" went down 2 days ago. Fields for #coltstrainingcamp2018 are starting to look good. @Colts @ATSSportsTurf @George_C_Murray



Kyle Allen

@kallen1799 · 5/25/18

Sports Turf Manager, Indianapolis, IN

Grow-In

8-4-5 with Armament®, AminoPrecise®, and Colonise®

PRODUCT DESCRIPTION/BENEFITS

Foliar-Pak Grow-In is an all-in-one product that provides a complete turfgrass establishment program with the convenience of one single product.

- Combines the foliar nutrients most necessary for rapid turfgrass establishment into one jug.
- Delivers a comprehensive array of beneficial components that charge the plant and the soil.
- Expedites maturity, density and hardness of the turfgrass stand.
- Enhances root development.
- Made for establishment of all turfgrass species.
- Ideal for recovery of turf damaged by biotic or abiotic stresses.
- Delivers a biological package specifically designed to bolster low organic soils.

AMINOPRECISE®

AminoPrecise® is a proprietary formulation technology used to create Foliar-Pak's new amino acid products. Using specific amino acids in chemical reactions with each individual nutrient, we can maximize the protection, solubility, entry into the plant, and movement through the plant's vascular system for each different nutrient-amino-acid compound. When soil tests—like our Soil Solver® diagnostic program—identify specific nutrient deficiencies, AminoPrecise products offer precise solutions.

GUARANTEED ANALYSIS

Total Nitrogen (N)	8.0%
6.2% Urea Nitrogen	
1.0% Other Water Soluble Nitrogen	
0.8% Slowly Available Water Soluble Nitrogen*	
Available Phosphate (P ₂ O ₅)	4.0%
Soluble Potash (K ₂ O)	5.0%
Boron (B)	0.02%
Copper (Cu)	0.05%
0.05% Chelated Copper	
Iron (Fe)	0.25%
0.25% Chelated Iron	
Manganese (Mn)	0.15%
0.15% Chelated Manganese	
Zinc (Zn)	0.07%
0.07% Chelated Zinc	

Derived from: urea, soy protein hydrolysate, urea-triazone, potassium phosphate, sodium borate, copper EDTA, iron DTPA, manganese EDTA, zinc EDTA
*Slowly available nitrogen from urea-triazone nitrogen

NON PLANT FOOD INGREDIENTS

Humic Acid	0.05%
(derived from leonardite)	
Seaweed Extract	0.05%
(derived from Ascophyllum nodosum (microbe food))	
Polyoxypropylene-Polyoxyethylene block copolymer	3.2%

BACTERIA: Bacillus licheniformis: 1,000,000 cfu/ml; Bacillus pasteurii: 1,000,000 cfu/ml; Bacillus subtilis: 1,000,000 cfu/ml; Paenibacillus azotofixans: 1,000,000 cfu/ml

PRODUCT INFORMATION:

Weight per Gallon: 10.0 lbs (4.5 kg)
pH: 8.2

GENERAL USE GUIDE

This product is tank mix compatible with most fertilizers and pesticides. However, due to variability in water sources and pesticide formulations a compatibility test is recommended. For foliar applications delay irrigation or mowing for 12 to 24 hours.

Golf Course Greens and Tees	Maintenance Applications: Apply 0.5 to 1.5 fl oz per 1000 sq ft every 7 to 14 days. Turf Recovery or Intense Stress: Apply 1.5 to 3.0 fl oz per 1000 sq ft every 7 to 14 days until turf sufficiently recovers.
Fairways Sports Turf	Apply 0.5 to 1.5 fl oz per 1000 sq ft. Tank mix with other fertilizers and pesticides for increased absorption and better turf health. Repeat applications every 14 to 28 days.
Professional Lawn Care	Apply 0.5 to 1.5 fl oz per 1000 sq ft. Tank mix with other fertilizers and pesticides for increased absorption and better turf health. Repeat applications every 30 to 45 days.





Before



After



“ I’m a BIG FAN of Foliar-Pak Grow-In! My service has always been results-driven, not price. Cheap does not work in this business. I was blown away by the results, especially during a severe drought and heat. I’ve completely implemented this product and have changed all our fertilizing programs based around this method.

David Stacey, Sports Turf Division
HydroSeed, Inc. | Osceola, Indiana



“ Foliar-Pak Grow-In has quickly become my “go-to” liquid fertilizer. It’s so easy to use, and I know the plant response is going to be consistent. We see a remarkable green up almost immediately after applying.

Wayne Ward, Head Groundskeeper
Raymond James Stadium | Tampa, Florida

Play-On

7-0-7 with Armament®, AminoPrecise®, and Colonise®

PRODUCT DESCRIPTION/BENEFITS

Foliar-Pak Play On takes the guesswork out of building a program for sports turf maintenance. It offers the following benefits:

- Combines the foliar nutrients most necessary for in-season turfgrass success in one jug.
- Delivers a comprehensive array of beneficial components that charge the plant and the soil.
- Improve stress tolerance, nutrient uptake and nutrient utilization.
- Promotes deeper, stronger, fibrous root systems for enhanced playability and quicker recovery from heavy traffic.
- Unlocks existing tied-up soil nutrients for predictable and consistent plant reponse.
- Provides a consistent controlled growth and long-lasting color.

AMINOPRECISE®

AminoPrecise® is a proprietary formulation technology used to create Foliar-Pak's new amino acid products. Using specific amino acids in chemical reactions with each individual nutrient, we can maximize the protection, solubility, entry into the plant, and movement through the plant's vascular system for each different nutrient-amino-acid compound. When soil tests—like our Soil Solver® diagnostic program—identify specific nutrient deficiencies, AminoPrecise products offer precise solutions.

GUARANTEED ANALYSIS

Total Nitrogen (N)	7.0%
2.7% Urea Nitrogen	
0.9% Other Water Soluble Nitrogen	
3.4% Slowly Available Water Soluble Nitrogen*	
Soluble Potash (K ₂ O).....	7.0%
Sulfur (S).....	2.0%
2.0% Combined Sulfur (S)	
Iron (Fe).....	0.35%
0.35% Chelated Iron	
Manganese (Mn)	0.30%
0.30% Chelated Manganese	
Zinc (Zn)	0.15%
0.15% Chelated Zinc	

Derived from: urea, soy protein hydrolysate, urea-triazone, potassium sulfate, iron DTPA, manganese EDTA, zinc EDTA

*Slowly available nitrogen from urea-triazone nitrogen

NON PLANT FOOD INGREDIENTS

Seaweed Extract	1.0%
(derived from Ascophyllum nodosum (microbe food))	
Polymer	2.4%

BACTERIA: Bacillus licheniformis: 1,000,000 cfu/ml; Bacillus pasteurii: 1,000,000 cfu/ml; Bacillus subtilis: 1,000,000 cfu/ml; Paenibacillus azotofixans: 300,000 cfu/ml

PRODUCT INFORMATION:

Weight per Gallon at 68 °F: 9.9 lbs (4.5 kg)
pH: 8.5

GENERAL USE GUIDE

This product is tank mix compatible with most fertilizers and pesticides. However, due to variability in water sources and pesticide formulations a compatibility test is recommended. Shake well.

Sports Turf	Apply 7.0 to 15.0 fl oz per 1,000 sq ft in enough water to provide sufficient foliar coverage. Apply every 7 to 21 days, or as needed. Can be tank mixed with other nutrients, control products or growth regulators.
Trees and Ornamentals	Use 2 gal Foliar-Pak Play-On per 100 gallons of water. Bedding Plants and Hanging Baskets: Drench 1 gal of finished solution per 20 sq ft of planted area (do not treat the general bed space). Treat each annual plant as if it covers 1 sq ft. For optimum results, fertilize every 2 weeks. Shrubs and Trees: Drench 1 gal of finished solution per 1" diameter of tree or shrub. In areas where turf is present, inject the solution into the soil.



Zoypalum

2-5-10 with Armament®, AminoPrecise®, and Colonise®

PRODUCT DESCRIPTION/BENEFITS

Foliar-Pak Zoypalum takes the guesswork out of building a program for turf types that thrive on low-nitrogen programs. It offers the following benefits:

- Combines the foliar nutrients most necessary for in-season turfgrass in one jug.
- Delivers a comprehensive array of beneficial components that charge the plant and the soil.
- Improves stress tolerance, nutrient uptake, and nutrient utilization.
- Promotes deeper, stronger, fibrous root systems for enhanced green speeds, and quicker recovery from heavy traffic.
- Unlocks existing tied-up soil nutrients for predictable and consistent plant response.
- Provides a consistent controlled growth and long-lasting color.

GUARANTEED ANALYSIS

Total Nitrogen (N)	2.0%
2.0% Water Soluble Nitrogen	
Available Phosphate (P ₂ O ₅)	5.0%
Soluble Potash (K ₂ O)	10.0%
Boron (B)	0.02%
Copper (Cu)	0.08%
0.08% Chelated Copper	
Iron (Fe)	0.25%
0.25% Chelated Iron	
Manganese (Mn)	0.25%
0.25% Chelated Manganese	
Zinc (Zn)	0.25%
0.25% Chelated Zinc	

Derived from: soy protein hydrolysate, potassium phosphate, potassium acetate, boric acid, copper EDTA, iron HEDTA, manganese EDTA, zinc EDTA

NON PLANT FOOD INGREDIENTS

Seaweed Extract	1.5%
(derived from Ascophyllum nodosum (microbe food))	
Polyoxypropylene-Polyoxyethylene block copolymer .	3.2%
Polymer	3.4%

BACTERIA: Bacillus licheniformis: 1,000,000 cfu/ml; Bacillus pasteurii: 1,000,000 cfu/ml; Bacillus subtilis: 1,000,000 cfu/ml; Paenibacillus azotofixans: 1,000,000 cfu/ml

PRODUCT INFORMATION:

Weight per Gallon: 10.5 lbs (4.7 kg)
pH: 6.6

GENERAL USE GUIDE

Use to grow and maintain plant and turf species—especially *Zoysia spp.* and *Paspalum spp.*—that require low nitrogen inputs for optimal establishment and turf vigor. It is also useful for fall feeding of plants that require higher levels of phosphorus and potassium before winter. This product is tank-mix compatible with most fertilizers and pesticides. However, due to variability in water sources and pesticide formulations, a compatibility test is recommended.

Golf Course Sports Turf Lawns

Maintenance:

Apply 6.0 oz per 1,000 sq ft in enough water to provide sufficient coverage. Apply every 7 days. Higher rates can be used when soil nutrients are limited by reduced granular application. Can be tank mixed with other nutrients, control products, or growth regulators.

Trees and Ornamentals

Use 2 gal Foliar-Pak Zoypalum per 100 gallons of water.

Shrubs and Trees:

Drench 1 gal of finished solution per 1" diameter of tree or shrub. In areas where turf is present, inject the solution into the soil.



BioWet

Soil Wetting Agent

PRODUCT DESCRIPTION/BENEFITS

- Hydro-Pak® BioWet is a proprietary formulation that contains designed-for-environment sulfonic and carboxylic acids that reduce soil surface tension and improve water infiltration allowing water and nutrients to reach the root zone.
- Hydro-Pak® BioWet is especially useful in areas that deal with bicarbonate and sodium issues as the anionic sulfonic and carboxylic acids work to help break down the bicarbonates and pull the sodium through the soil profile.
- Hydro-Pak® BioWet contains coconut- and sugar-based compounds that work to maintain consistent moisture levels in the root zone.
- By working to improve the moisture balance in the root zone through a combination of biodegradable penetration and hydration agents, Hydro-Pak® BioWet improves oxygen levels, microbial levels, and plant stress tolerance.

PRIMARY FUNCTIONING AGENTS

Alkyl sulfonic acids.....	20.0%
Carboxylic acids.....	20.0%
Cocodiethanolamide	15.0%
D-glucitol	5.0%
Total Other Inert Ingredients.....	40.0%

PRODUCT INFORMATION:

Weight per Gallon: 8.87 lbs
pH: 5.2

GENERAL USE GUIDE

BioWet is a multi-functional wetting agent derived from DFE (designed for environment) sulfonic and carboxylic acid penetrants, and corn- and coconut-based hydration agents. BioWet is a fully biodegradable wetting agent that works with the soil ecology.

Golf Course Turf, Athletic Fields, Lawns

Apply 4 to 6 fl oz per 1000 sq ft in at least 1 gallon of water. Irrigation soon after application may be advised to move product into the root zone. Reapplication every 30 days may be warranted in situations where hydrophobic conditions and soluble salt levels increase in the soil.

Flushing of Salts and Bicarbonate Functions

Apply 6 fl oz per 1000 sq ft in at least 1 gallon of water, and follow with a heavy irrigation cycle to move water through the soil profile past the root zone.

foliar

soil



Product	pH	lbs/gal	Pounds of Nutrient per Gallon Applied													Nutrient Activators	
			N	P ₂ O ₃	K ₂ O	Ca	B	Cu	S	Fe	Mg	Mn	Mo	Si	Zn		
Foundation Forty	10.2	12.4	0.5	0.99													L
CSi L	8.5	10.2	0.2												2.55		L
Gold Standard 45	4	11.2	1.12														L
Armament Concentrate	7.2	10.6	0.95														A
Colonise Bio	7.2	9.8	0.2														L, A, S, H, P
Grow-In	8.2	10.0	0.8	0.4	0.5		0.002	0.005		0.025		0.015				0.007	L, A, P, S, H, BR
Play On	8.5	9.9	0.69		0.69				0.2	0.03		0.03				0.01	L, A, S, H
Zoypalum	6.6	10.5	0.8	0.4	0.5		0.002	0.008		0.025		0.025				0.025	L, A, P, S, H, BR

Nutrient Activators

L = L-Amino Acids

There are numerous products on the market that claim to contain amino acids, but it can be difficult to determine whether they are available and in sufficient amounts to make a positive impact on plant health and nutrient uptake. Only L-amino acids are available for plants to use. The Foliar-Pak amino package has been reformulated for increased nitrogen fixation, chlorophyll production, energy production, and the production of anti-stress compounds.

A = Armament Technology

Armament protects nutrients from adverse interactions in the soil, which render them unavailable, while increasing nutrient uptake and use efficiency by as much as 30%.

S = Sea Plant Extract, H = Humate Substances

Humic acids and seaweed extract supply various carbon structures, which take on a multitude of roles in the plant and soil. Humic acids, as well as the organic acids and sugar alcohols from seaweed, directly impact plant nutrition by complexing with various nutrients, thus improving foliar and root availability of those nutrients. In an indirect manner, humics and

seaweed work to improve plant functions such as chlorophyll development, water utilization and plant defense mechanisms. These improvements result in a healthier plant with better root structure that is able to absorb foliar and soil nutrients more efficiently. In the soil seaweed escalates biological activity, which results in nutrient mineralization and an environment more suitable for root functioning.

P = Polysaccharides

Built from a malt extract that is loaded with vitamins, minerals, and a complex series of different molecular-weight sugars, Foliar-Pak's polysaccharides create terrific complexes with positively charged minerals such as iron, manganese, and zinc. Being comprised of a variety of different classes of sugar compounds, the polysaccharides provide a range of protection to minerals - with the low-molecular weight sugars breaking down quickly and the high-molecular weight, complex sugars providing long-term protection to minerals and sustenance for microbial life.




BP = Block Polymer

Block polymers work as a spreading surfactant to increase foliar coverage. This increases opportunity for uptake through stomates and transcuticular pores. In the soil the block polymer improves water distribution and aeration, creating a positive environment for root functioning and microbial life.



Foliar-Pak

by **EnP**

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