



The HydraFiber[®] Story

“HydraFiber is by far the most innovative commercially produced soil amending product to hit the industry in a long time. The process is unique, precise and has an endless abundance of material. The QC is high and the team supporting the HydraFiber product line is impressive.”

Chuck Zala, Director Of Global Sourcing
Costa Farms

AERIAL VIEW
OF OUR
CONOVER PLANT

PROFILE[®] PRODUCTS: SOLUTIONS FOR YOUR ENVIRONMENT[™]

The HydraFiber Advanced Substrate product line is the latest innovation from Profile Products, a world leader that has proudly offered researched and proven soil / media solutions for many different markets for over 50 years.

Profile delivers environmentally sound and cost-efficient solutions for soil modification, erosion control, turf and plant establishment, and most recently, horticultural production. The company is the largest manufacturer and supplier of hydraulically applied mulch and additives, as well as biotic and ceramic conditioners to amend soil. Profile is also unsurpassed in the industry for their ground-breaking technology.



Following 10 years of research, development and testing by Profile, several of the world's most progressive greenhouse growers began trialing the substrate technology that now makes up the **HYDRAFIBER ULTRA** family. The goal of our engineered fiber HydraFiber products: to give them a cost-effective, proven amendment or alternative to perlite, peat, pine bark or coir for their growing mix program. After seeing proven performance on their own benches, many of the top 100 ornamental growers in North America switched to using HydraFiber Ultra.

Tremendously committed to making sure their products work, the Profile R&D team continues to research and develop new horticulture products. Expanding the lineup with a broader range

of solutions for growers and soil blenders are **NEW HYDRAFIBER HYBRID** and **NEW HYDRAFIBER EZ BLEND**, both able to be used without specialized processing equipment.

ENGINEERED FOR CONSISTENCY

HydraFiber products are made using renewable and virgin loblolly pine (*Pinus taeda*) wood and bark from reforested farms. Research shows that this Southern Yellow pine species is one of the safest materials to combine and place into a substrate, without the toxins found in hardwoods and other species that can affect plant establishment and growth.

Our unique Thermally Refined® process combines the wood and bark, and refines them in a pressurized vessel to create singulated, small-diameter, long, thin strands with large surface area (U.S. Patent 10,266,457 and patents pending).

- > Only heat, steam and pressure are used during the refining process – never any chemicals
- > Sterilized through the entire manufacturing process
- > Quality control and quality assurance checks every 30 minutes during production assure that HydraFiber is the same 365/24/7
- > Blends easily with other mix components
- > Available when you want it



IMPROVES PROFIT MARGINS BY LOWERING COSTS

All HydraFiber material is shipped in compressed bales, with compressed towers available soon for new Hybrid and EZ Blend products. That's key to lowering shipping costs, saving storage space and unloading fewer trucks.

- > More efficient storage per cubic yard of material than peat, bark, perlite, coir or vermiculite
- > Expedited shipping available for all standard HydraFiber formulations
- > Locked-in contract pricing available
- > Arrives on time, unfrozen and ready to use – no shortage worries

DELIVERS PROVEN RESULTS

Leading growers are now using HydraFiber blends in their production every day, all day and seeing positive effects on their plants and their business.

- > Growers report seamless transitions with minimal production changes
- > Provides plants with more air space to improve root development
- > Solves the operational headaches associated with media

PROUDLY MADE IN THE USA

Profile recently opened a second, state-of-the-art processing plant at the Conover, North Carolina manufacturing and distribution center to double the effective production capability and immediately increase our production by 50%. This assures that we continue to meet the growing demand for sustainable and readily available raw materials like HydraFiber.

- > Profile has already recycled more than 3.5 billion pounds of wood and paper, and will continue to divert those resources from the waste stream and reintroduce them into the environment as sustainable products.
- > Our plant is in close proximity to our raw ingredients, keeping trucking to a minimum and reducing our carbon footprint.

▶ Watch HydraFiber being made in a behind-the-scenes virtual tour of our Conover plant: bit.ly/ConoverStory

“Switching to HydraFiber has been one of the smartest moves we have made in the past few years. It has provided outstanding plant quality, and has also made us analyze our entire soil mixing line which allowed us to update a couple things that were maybe a little out of calibration.”

Bobby Barnitz, Vice President
Bob's Market And Greenhouses, Inc.

Grow Better Margins and Better Plants

"In all the years that I've mixed soil, I've never seen the root systems just permeate the soil ball like they are now with HydraFiber. Get a good root system and the plant will come."

Kevin Koepler, General Manager
Sunbelt Greenhouses

Engineered fiber HydraFiber is the only consistent and managed growing mix component that's domestic, reliable and readily available.

BETTER ROOT DEVELOPMENT

Growers using HydraFiber blends report equal or better root development compared to other mixes. HydraFiber delivers higher air space than other popular substrate ingredients, and creates a superior air-rich root zone environment while providing more available water for plant uptake.

GERANIUM PRODUCTION



PEAT 50%
HYDRAFIBER ULTRA 065WB 50%

COLEUS PRODUCTION

PEAT-PERLITE MIX VS. HYDRAFIBER EZ BLEND MIX



CONTROL:
PEAT-PERLITE MIX

PEAT 50%
HYDRAFIBER EZ BLEND 50%

DIEFFENBACHIA PRODUCTION

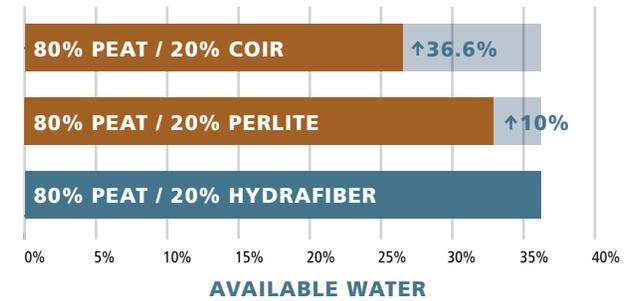


COIR 70%
HYDRAFIBER ULTRA 365WB 30%

EASIER WATER UPTAKE

Water is stored on HydraFiber's surface and the tremendous surface area makes that water work more efficiently, sending 10% to up to 36.6% more water to every plant.

ADDING 20% HYDRAFIBER TO PEAT INCREASES AVAILABLE WATER COMPARED TO 20% PERLITE OR 20% COIR BLENDED WITH PEAT



Source: Waypoint Analytical

PETUNIA PROPAGATION



PEAT 60%
HYDRAFIBER ULTRA 160WB 40%

CYCLAMEN PRODUCTION



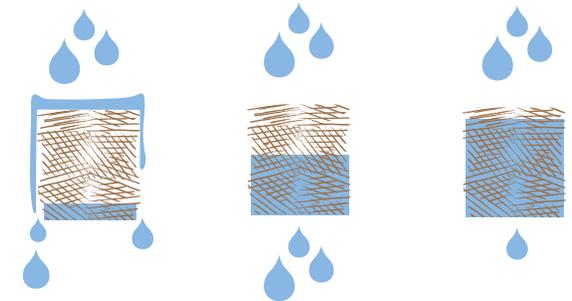
PEAT 60%
HYDRAFIBER ULTRA 065WB 40%

▶ See how
HydraFiber's
unique structure
promotes robust root
development:
bit.ly/HydraFiberRoots

"I like the root system I get from HydraFiber due to the high porosity in the mix."

Marc Verdel, Head Grower
Battlefield Farms

HYDRAFIBER'S TREMENDOUS SURFACE AREA MAKES WATER WORK MORE EFFICIENTLY



PEAT
PEAT'S WAXY CUTICLE SHEDS WATER AND DOESN'T STORE IT FOR THE PLANT

HYDRAFIBER
HYDRAFIBER THERMALLY REFINED FIBERS STORE AND RELEASE WATER TO THE PLANT WHEN IT NEEDS IT

COIR
COIR FIBERS TRAP WATER NEEDED FOR THE PLANT



SAFE OUTDOOR STORAGE

HydraFiber bales are wrapped in plastic, clearly labeled with the formulation name for easy identification by your crew. Each pallet receives a pallet cap and is shrink-wrapped. As long as the plastic is not pierced at off-loading, HydraFiber can be safely stored outdoors.

In addition, with moisture levels standard at 20% for HydraFiber Ultra and HydraFiber Hybrid, these raw materials do not freeze.

GET THE MOST FROM YOUR HYDRAFIBER BLENDS

Our technical and product reps will help you get the highest yields from every bale, mix correct blends and maximize the results you see with HydraFiber. We use proven research and trialing – from our labs and from independent sources – to recommend the best formulations, offer product advice and educate with the best cultural practices for your mixes. We offer many topics including:

- > Optimizing pH
- > Watering guidelines
- > Filling pots by machine and by hand
- > AgriNomix tech guides for HydraFiber processing units

▶ Visit our revamped [HydraFiber.com](https://www.hydrfiber.com) for personalized, timely and pertinent info 24/7.

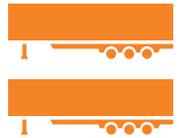
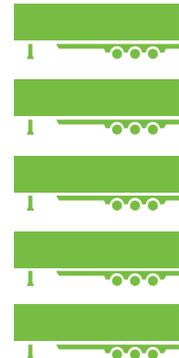
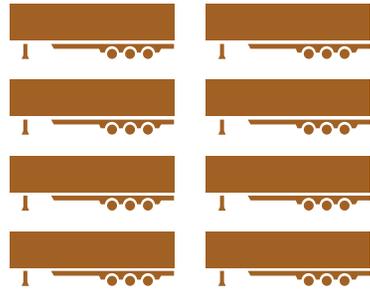
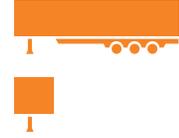
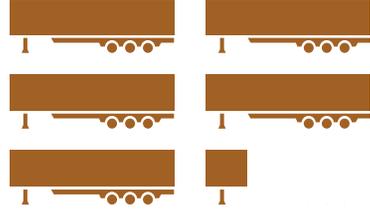
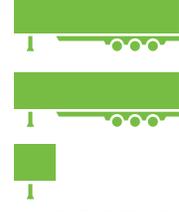
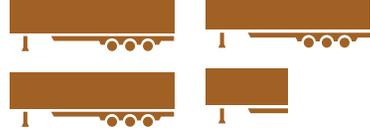
IMPROVED BUSINESS EFFICIENCIES

Whichever type of HydraFiber you bring in, the number of truckloads needed is usually lower compared to other key materials.

HYDRAFIBER: A LITTLE GOES A LONG WAY!

“The biggest efficiency is space savings. We’re able to bring in 3 to 4 loads of compressed HydraFiber (Ultra) vs. 30 to 40 of perlite.”

Ron Van Der Hengst, President Of Operations
South Central Growers

HydraFiber	Coir	Peat	Perlite
 1 HYDRAFIBER ULTRA SEMI =	 2 COIR SEMIS	 5 PEAT SEMIS	 8 PERLITE SEMIS
 1 HYDRAFIBER HYBRID SEMI =	 1.25 COIR SEMIS	 3.25 PEAT SEMIS	 5.25 PERLITE SEMIS
 1 HYDRAFIBER EZ BLEND SEMI =	 1 COIR SEMI	 2.25 PEAT SEMIS	 3.5 PERLITE SEMIS



BEST FOR:

Growers who amend / blend their own soil and have one or more transplant lines

Requires specialized equipment

Our original product line has a new name, but is the same powerful and proven product that has become a game changer for professional greenhouse growers across the globe. Each is seeing better margins, whether it's from improved root development and overall plant quality, inventory management, shelf life, efficiency or environmental benefits.

The first substantial substrate innovation in almost 45 years, HydraFiber Ultra is an approximately 98% porous fiber substrate amendment with extremely low bulk density (1.4 +/- 0.20 lbs. per opened cubic foot). Due to its highly compressed nature, HydraFiber Ultra is the most economical raw material of our product line, delivering the best cost savings to growers.

> Available in 50-lb. bales



PROVEN AT HIGHER INCLUSION RATES

The norm for potting media starts with 30% HydraFiber. In many cases, this replaces the perlite being used. Once growers realize that HydraFiber blends deliver a more robust root system and start seeing better margins, they look to increase their inclusion rate. Several U.S. growers have seen success with rates up to 50% HydraFiber Ultra in their liner blends and in finishing perennials and poinsettias.

Recent lab tests conducted by RHP certified the suitability of using HydraFiber Ultra at rates of up to 50% in the growing mix, without needing to increase nitrogen application. Located in the Netherlands, RHP is widely recognized around the world for more than 55 years of expertise in monitoring and certifying the quality of substrates.

"I have 25 people on my growing staff and each had no problem moving from standard perlite mix to HydraFiber (Ultra) mix. The transition was so easy."

Paul Hardiman, Head Grower
Dan Schantz Farms & Greenhouses



5 FORMULATIONS FOR EVERY GROWING NEED

Let us recommend the best formulations for your crop types and timing. HydraFiber Ultra can also be custom manufactured to meet your specific needs.

065WB & 090WB

USES: PROPAGATION, 4 IN., 6 IN. & GALLONS



160WB

USES: 4 IN., 6 IN., 1 GALLON & 2 GALLON



365WB & 510WB

USES: 1 GALLON, 2 GALLON & LARGER



HYDRAFIBER ULTRA TECH SPECS

CHEMICAL CHARACTERISTICS

	065WB	090WB	160WB	365WB	510WB
pH	—	—	4.5 +/- 0.4	—	—
EC (mS/cm)	—	—	0.01 – 0.19	—	—
MOISTURE CONTENT [^]	—	—	20% +/- 4%	—	—
ORGANIC MATTER ^{^^}	—	—	99.7 +/- 0.2%	—	—

[^] Measured on weight basis

^{^^} Loss on Ignition (ASTM D586-97)

PHYSICAL CHARACTERISTICS*

	065WB	090WB	160WB	365WB	510WB
TOTAL POROSITY	93-97%	93-96%	96-99%	96-99%	95-99%
CONTAINER CAPACITY (WHC)**	49-55%	41-47%	42-49%	35-42%	27-35%
AIR PORE SPACE	39-47%	47-55%	48-55%	58-63%	60-69%
COMPACTED BULK DENSITY	—	18.5 lbs./ft. ³ +/- 1.5 lbs./ft. ³ (296 Kg/m ³ +/- 24 Kg/m ³)		—	—
LOOSE BULK DENSITY***	—	1.4 lbs./ft. ³ +/- 0.2 lbs./ft. ³ (22 Kg/m ³ +/- 3 Kg/m ³)		—	—

* Derived from Porometer Test Method-NCSU Substrates Lab
 ** WHC = Water-Holding Capacity
 *** Profile Fiber Opener

SEAMLESS SUCCESS WITH HYDRAFIBER ULTRA

An important feature of HydraFiber Ultra is that it comes compressed and packaged in 50-lb. bales with a 13:1 expansion rate. That's key to reducing your shipping costs, saving storage space and unloading fewer trucks.

AgriNomix in Oberlin, Ohio – industry leaders in greenhouse manufacturing equipment – developed the HydraFiber processing units to fit easily into most existing mix lines. These machines are designed to return the HydraFiber Ultra bales to their fibrous state and maximize the yield of each bale, producing 1.1 cubic yards of singulated fibrous material that's ready to blend with other components.

ACCESSORIES

AgriNomix also offers a Universal Soil Conditioner to improve and simplify pack filling (recommended for optimal fill with all HydraFiber products) and a Vacuum Lift Assembly to lighten the load.



AGRINOMIX.COM
800-354-3750

▶ Watch our short video to see the machines in action: vimeo.com/hydrafiber/hpu

All machines are Patent Pending.

NOTE: Machine photos are for illustrative purposes only. All HydraFiber bales must have plastic removed for processing.

HydraFiber Expander (HE) Unit



BEST FOR: GROWERS WITH ONE TO TWO PLANTING LINES

- > Durable performance in a compact, smaller-footprint unit
- > Easy to self-install into most existing mix lines
- > Can be fed directly from your bale shaver or mix line
- > Blends HydraFiber Ultra with a single substrate



HydraFiber Processing Unit (HPU)



BEST FOR: REGIONAL BLENDERS AND GROWERS

- > Maximizes HydraFiber Ultra yield and uniformity
- > Can be employed as the blending line mixer chamber
- > Industrial computer with "per call" variable HydraFiber Ultra ratio control when used with full recipe mix system
- > Touch screen with bale counter and maintenance reminders
- > Stainless steel mix chamber



Extra Wide HydraFiber Processing Unit



BEST FOR: HIGHEST-CAPACITY BLENDERS AND GROWERS

- > Dual bale in-feed doubles the throughput of exceptionally blended mix
- > Variable speed direct drive for every roller allows for individual speed control and minimizes maintenance and component wear





BEST FOR:

Blenders and growers who process soil with a bale shaver or bale buster

No specialized equipment needed

“Our decision to align ourselves with HydraFiber was significant but a natural choice. The team is fully committed to getting growing media right for growers.”

Neil McKeown, Business Development Manager
Gro-Bark

HydraFiber Hybrid gives blenders and growers a high-value product with the same quality and cost relief advantages as our performance-proven Ultra raw material, but with the ease of no special equipment required. Any common expansion unit already in place works well for opening the HydraFiber Hybrid product. And like the complete HydraFiber lineup, Hybrid comes highly compressed to reduce the carbon footprint as well as lowering freight costs.

- > 100-cu. ft. towers coming in 2020
- > Coming in 2020: OMRI Listed for Organic Use

CONNECT WITH HYDRAFIBER BLENDING PARTNERS

We have partnered with several leading pre-mix companies and expect the lineup to grow. If you're not mixing your own blends, let us connect you with one of the HydraFiber blenders.

HYDRAFIBER HYBRID TECH SPECS

CHEMICAL CHARACTERISTICS

pH	4.5 +/- 0.4
EC (mS/cm)	0.01 – 0.20
MOISTURE CONTENT [^]	20% +/- 4%
ORGANIC MATTER ^{^^}	99.2 +/- 0.2%

[^] Measured on weight basis
^{^^} Loss on Ignition (ASTM D586-97)

PHYSICAL CHARACTERISTICS*

TOTAL POROSITY	98 – 99%
CONTAINER CAPACITY (WHC)**	47 – 52%
AIR PORE SPACE	47 – 52%
COMPACTED BULK DENSITY	19.6 lbs./ft. ³ +/- 1.5 lbs./ft. ³ (314 Kg/m ³ +/- 24 Kg/m ³)
LOOSE BULK DENSITY	2.75 lbs./ft. ³ +/- 0.15 lbs./ft. ³ 44 Kg/m ³ +/- 2.5 Kg/m ³)

* Derived from Porometer Test Method-NCSU Substrates Lab
** WHC = Water-Holding Capacity



BEST FOR:

**Growers who use
bale busters or
pad mix**

**No specialized
equipment needed**

Many growers asked us to create a HydraFiber raw material that performs just as well as our original Ultra substrate, but did not require them to add equipment to their existing line. NEW HydraFiber EZ Blend does just that, allowing a seamless transition into operations already working with a bale buster or pad mix blending.

Engineered using our unique Thermally Refined process (details on page 3), EZ Blend offers an alternative to other raw materials and has an appearance similar to peat. Extensively trialed before introduction, EZ Blend delivers many of the same cost relief benefits as Ultra.

- > Extra air space in soil improves rooting and delivers exceptional finished plant quality
- > Compressed material lowers shipping costs, saves on storage space and allows for less unloading labor
- > Mixes easily with other media substrates; the HydraFiber experts will guide you on how much nitrogen to add for best results
- > Now available in 40-lb. bales; 100-cu. ft. towers coming in 2020
- > Can be ordered with or without surfactant applied
- > Coming in 2020: OMRI Listed for Organic Use

HYDRAFIBER EZ BLEND TECH SPECS

CHEMICAL CHARACTERISTICS

pH	4.8 +/- 0.8
EC (mS/cm)	0.01 – 0.20
MOISTURE CONTENT [^]	35% +/- 5%
ORGANIC MATTER ^{^^}	97.5 +/- 0.2%

[^] Measured on weight basis
^{^^} Loss on Ignition (ASTM D586-97)

PHYSICAL CHARACTERISTICS*

TOTAL POROSITY	97 – 99%
CONTAINER CAPACITY (WHC)**	47 – 48%
AIR PORE SPACE	48 – 51%
COMPACTED BULK DENSITY	19.6 lbs./ft. ³ +/- 1.5 lbs./ft. ³ (314 Kg/m ³ +/- 24 Kg/m ³)
LOOSE BULK DENSITY	4 lbs./ft. ³ +/- 0.15 lbs./ft. ³ 64 Kg/m ³ +/- 2.5 Kg/m ³)

* Derived from Porometer Test Method-NCSU Substrates Lab
 ** WHC = Water-Holding Capacity

“The service has been great – I can literally order a semi-load of HydraFiber and it’s there the next week.”

Chris Bergen, Owner
Bergen’s Greenhouse

WE STAND BY YOU 24/7

HydraFiber Advanced Substrate helps you put high-quality, consistent growing media into each pot and pack so that every plant is healthy, strong and super-sellable. More importantly, the arrival of your first truckload of HydraFiber is just the beginning. With over 250 years of combined experience, you can count on our experts to be at your side through every crop and help you *Grow Better Margins and Better Plants.*

Visit HydraFiber.com for the new **HydraFiber Cost Savings Calculator.**

Run the numbers and see for yourself how switching to HydraFiber will have a positive effect on your bottom line.



800-508-8681
hydrafiber@profileproducts.com

HYDRAFIBER COMES FROM PROFILE PRODUCTS,
 PROUDLY OFFERING RESEARCHED AND PROVEN
 SOIL / MEDIA SOLUTIONS FOR OVER 50 YEARS.



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 Buffalo Grove, IL 60089

www.profileproducts.com



THE ULTIMATE GROWING MEDIA SUBSTRATE

Whether you're a grower or blender, large or small, HydraFiber Advanced Substrate products offer solutions for everyone.

	 ADVANCED SUBSTRATE		
	Ultra	NEW Hybrid	NEW EZ Blend
	PAGE 7-8	PAGE 10	PAGE 11
EXPANSION RATE	13:1	6:1	5:1
SPECIALIZED HYDRAFIBER EQUIPMENT NEEDED	Yes	No	No
RAW MATERIAL REPLACED	Directly replaces perlite, pumice, rice hulls, Styrofoam Reduces grower consumption of peat, coir, bark	Directly replaces perlite, pumice, rice hulls, Styrofoam Reduces grower consumption of peat, coir, bark	Directly replaces perlite, pumice, rice hulls, Styrofoam Reduces grower consumption of peat, coir, bark
FORMULATIONS AVAILABLE	Five formulations: 065WB, 090WB, 160WB, 365WB, 510WB	One formulation	Two formulations: With Surfactant, Without Surfactant
MAXIMUM INCLUSION RATE	50%	50%	50%
1 SEMITRAILER HYDRAFIBER EQUIVALENTS	= 8 semis perlite = 5 semis peat = 2 semis coir	= 5.25 semis perlite = 3.25 semis peat = 1.25 semis coir	= 3.5 semis perlite = 2.25 semis peat = 1 semi coir
PACKAGING SIZES AVAILABLE	50-lb. bales	100-cu. ft. towers coming in 2020	40-lb. bales; 100-cu. ft. towers coming in 2020
BALE YIELD (COMPRESSED)	2.7 cu. ft.	N/A	2.04 cu. ft.
BALE YIELD (LOOSE)	23.8 to 29.4 cu. ft.	N/A	9.6 to 10.4 cu. ft.
BALE DIMENSIONS	26 x 18 x 10"	N/A	22 x 16 x 10"
PALLET YIELD	952 to 1,176 cu. ft.	552 to 615 cu. ft.	386 to 416 cu. ft.
SHIPPED	40 bales per pallet	1 tower per pallet	40 bales per pallet
PALLET WEIGHT	2,000 lbs.	1,600 lbs.	1,600 lbs.
VOLUME PER TON	1,100 cu. ft.	727 cu. ft.	500 cu. ft.