Eazy Plug® system

the organic way to successful yields

** measured by 1-1.5 potting soil method*

Eazy Plug® system

Growing organic is not just about taking care of the environment and sustainability.

It is about quality and taste of fruit and vegetables.

The Eazy Plug® system is not only great because of organic growing, it proves best for striving to optimize yields.

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Air pruning

Water and nutrient uptake
Water and nutrient absorption at root level mainly takes place through the root hairs. Hair roots are being formed just behind the root cap and do not develop along the base stem of the root. By way of branching its roots, more root caps arise and the plant increases its hair root mass and with it the plant's access to available water and nutrients.

Air pruning effect
When root tips become exposed to relatively dry air, they dehydrate and get "burned". As a result, the plant will develop new and healthy branching roots. These developed secondary roots sprout up along the length of the primary roots and progress until the same series of events takes place again. This way air pruning triggers the development of new roots and leads to a more fibrous, highly branched out root system. A branched root structure will contain a much wider network of hair roots, allowing a plant to more efficiently uptake water and nutrients while increasing growth and overall plant health.

Root suffocation in pottery
The impenetrable shell of a standard plastic or terracotta pot shows probing roots circle around the sides and base in an ongoing attempt to expand its root structure. This leads to a large amount of roots being positioned up against the pot wall, with little to no hair root structure towards the centre of the pot. Root structure will be poorly developed, water and nutrient uptake is minimal and roots are prone to suffocation. One does not make effective use of the volume of the growing media.

Root development sleeved media
When a grow medium is encased or wrapped in a plastic sleeve, one does make use of the air pruning effect. Elongating roots will enter into the humid air between medium and sleeve. At these high humidity levels, the roots will not die en and will continue their growth. The result is long primary roots growing between medium and sleeve, without branching and without the development of a hair root mass inside the medium. This way the volume of the medium is poorly used for the development of hair root mass and with it there is little uptake of water and nutrients.

Technical cultivation advice
Ask your crop advisor or contact your supplier

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Waste treatment

Eazy Plug® system
The Eazy Plug® system is designed to optimally make use of space and to allow an industrial way of working. All components are strongly bonded together, making them suitable for any kind of automated systems. Starting with seeds or cuttings in the space-saving Plugs, plant growth can be continued in Blocks and Pyramids up to full cycle. Due to material properties and well engineered shapes, transplanting is easy and quick without any risk on transplant shocks.

By creating a material and system that is self regulating, results no longer depend on personal knowledge or involvement. Not only less error-prone, but also providing much more stable values like air-to-water ratio, pH and EC levels. Resulting in continuously a very stable culture with little to no failure.

Compostability
Eazy Plug® materials are declared a 100% compostable in normal composting conditions. No industrial composting circumstances necessary. The bonding of its components does not have a discernible effect on the composting proces. Combined with its non-toxicity, Eazy Plug® materials can simply be put into soil or any other natural environment without leaving a footprint.

Denature
For critical waste processes, the Eazy Plug® system consists of several components that allow for an easy separation after cultivation. Only Plug and Block will contain the original cutting and formed callus from which root structure and plant have emerged. The bulky Pyramid will only contain a dense structure of small hair roots, without any regenerative capacity. When all regenerative residues need a specific waste route, the Plug and Block can easily and quickly be separated from Pyramid, thus minimizing the volume that needs to be denatured. The Pyramid can be recycled or composted in a regular way.

Recycling
Looking at composting the Eazy Plug® material, the material itself actually does not need composting. What needs to be composted is the hair root mass inside the Pyramid. Due to the airy character of the Eazy Plug® material and the thin hair roots, composting is very quick and easy.
Eazy Plug® material can be:
* used as soil improver
* easily composted, packed and sold as composted soil

Cradle to cradle
The Eazy Plug® system is designed to follow the cradle to cradle principle. Cradle to cradle (C2C) is a different way of thinking about designing sustainable solutions in the form of products and processes developed by William McDonough and Michael Braungart. The core of this philosophy is that the materials that have been used in one product can be reused in a high quality manner in a next product, in a technical or in a biological cycle.

Looking for the best way of waste treatment for your specific application, please ask your crop advisor or contact your supplier

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Eazy Plug®

Characteristics

Model	: square plug
Size	: 3.5x3.5x3.0 cm
Volume	: 0.035 L
Weight moist	: 26 gr
Weight dried	: 3 gr
Air-to-water ratio	: 20-80
EC	: 1.0 *
pH	: 5.8 *

Features
self regulating
easy to control
air pruning for substantial enlargement hair root mass
suitable for gradual drier cultivation

Compatibility
all known growing media, like Rock Wool, coir pith, black and white peat, garden soil, potting soil, soil-less mixes, bark fines and wood mulch, sand and grit, wood fibers, perlite, pumice, clay and vermiculite

Employability
1.hydroponic systems like eb&flow, drip-feed (recovery and non-recovery), nutrient film technique, wick-systems, floating platforms, deep water culture
2.aquaponic systems
3.dry hydroponics
4.soil (indoor and outdoor)

Re-moistening time when completely dehydrated
- pouring from above < 10 seconds
- immerge < 10 seconds
- drip-feed - depends on the ratio
- watering from below < 45 seconds

Composting
100% in normal composting conditions, no industrial composting necessary
Declared: bonding of components has no discernible effect on compostability

Safety
Declared: material meets safety requirements of REACH

Toxicity
Declared: non-toxic

Denature after cultivation
Plug contains cutting stem and callus and can, in potency, contain a regenerative capacity and needs to be denatured by either a strong acid or base, concentrated inorganic salts, organic solvents (alcohol or chloroform), radiation or heat. Please contact your crop advisor.

Technical cultivation advice
Ask your crop advisor or contact your supplier.

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Eazy Block®

Characteristics

Model	: block
Size	: 7.5x7.5x6.5 cm
Volume	: 0.35 L
Weight moist	: 195 gr
Weight dried	: 35 gr
Air-to-water ratio	: 20-80
EC	: 1.0 *
pH	: 5.8 *

Features
self regulating
easy to control
air pruning for substantial enlargement hair root mass
suitable for gradual drier cultivation

Compatibility
all known growing media, like Rock Wool, coir pith, black and white peat, garden soil, potting soil, soil-less mixes, bark fines and wood mulch, sand and grit, wood fibers, perlite, pumice, clay and vermiculite

Employability
1.hydroponic systems like eb&flow, drip-feed (recovery and non-recovery), nutrient film technique, wick-systems, floating platforms, deep water culture
2.aquaponic systems
3.dry hydroponics
4.soil (indoor and outdoor)

Re-moistening time when completely dehydrated
- pouring from above < 15 seconds
- immerge < 15 seconds
- drip-feed - depends on the ratio
- watering at base < 90 seconds

Composting
100% in normal composting conditions, no industrial composting necessary
Declared: bonding of components has no discernible effect on compostability

Safety
Declared: material meets safety requirements of REACH

Toxicity
Declared: non-toxic

Denature after cultivation
Block contains plug with cutting stem and callus and can, in potency, contain a regenerative capacity and needs to be denatured by either a strong acid or base, concentrated inorganic salts, organic solvents (alcohol or chloroform), radiation or heat. Please contact your crop advisor.

Cultivation details
To make use of air pruning effect, usage of the pyramid without sleeve is strongly advised.
In such case photosynthetic algae like green algae can occur. This does not effect plant life and is only an optical issue. Green algae can be easily treated with fungicides and/or a light copper solution.

Technical cultivation advice
Ask your crop advisor or contact your supplier.

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Eazy Pyramid®

Characteristics

Model	: pyramid
Size	: 25x25x15 cm
Volume	: 4.5 L
Weight moist	: 3.6 kg
Weight dried	: 0.6 kg
Air-to-water ratio	: 20-80
EC	: 1.0 *
pH	: 5.8 *

Features
self regulating
easy to control
air pruning for substantial enlargement hair root mass
suitable for gradual drier cultivation

Compatibility
all known growing media, like Rock Wool, coir pith, black and white peat, garden soil, potting soil, soil-less mixes, bark fines and wood mulch, sand and grit, wood fibers, perlite, pumice, clay and vermiculite

Employability
1.hydroponic systems like eb&flow, drip-feed (recovery and non-recovery), nutrient film technique, wick-systems, floating platforms, deep water culture
2.aquaponic systems
3.dry hydroponics
4.soil (indoor and outdoor)

Re-moistening time when completely dehydrated
- pouring from above < 2 minutes
- immerge < 2 minutes
- drip-feed - depends on ratio
- watering from below < 60 minutes

Composting
100% in normal composting conditions, no industrial composting necessary
Declared: bonding of components has no discernible effect on compostability

Safety
Declared: material meets safety requirements of REACH

Toxicity
Declared: non-toxic

Recycling after cultivation
The pyramid does not contain any plant residue with regenerative capacity and can be recycled by:
1.use as soil improver
2.add composting initiator and pack as compost bags
3.re-usage after steam-clean or microwave-clean

Cultivation details
For air pruning effect, usage of the pyramid without sleeve is strongly advised.
In such case photosynthetic algae like green algae can occur. This does not effect plant life and is only an optical issue. Green algae can be easily treated with fungicides and/or a light copper solution.

Technical cultivation advice
Ask your crop advisor or contact your supplier

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