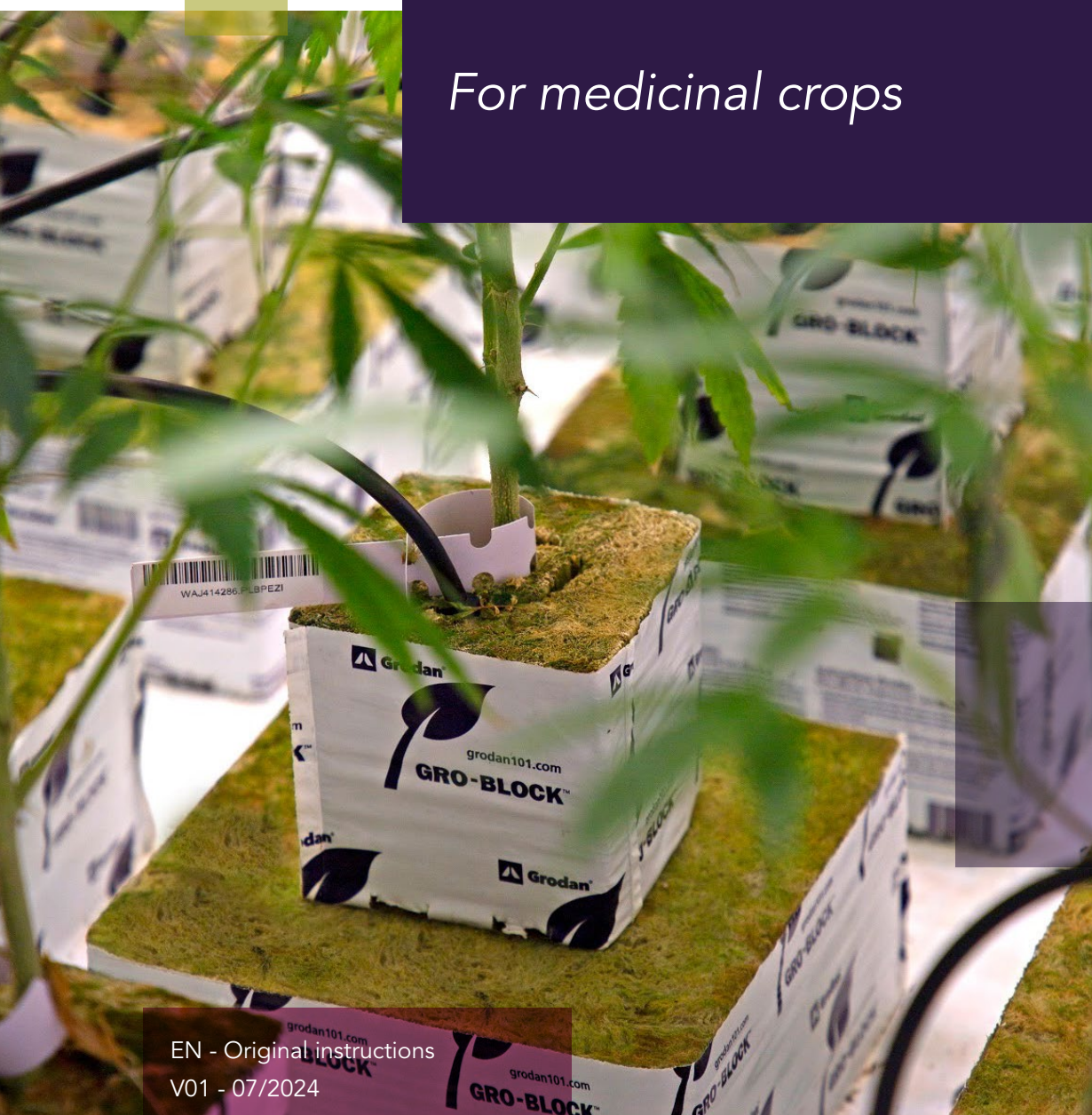


Grodan Blocks

Instruction manual

For medicinal crops



EN - Original instructions
V01 - 07/2024

Designed to grow

Thank you for choosing Grodan!

Grodan is the global leader in supplying soilless rootzone management solutions for Controlled Environment Agriculture. These solutions are applied to the cultivation of vegetables and medicinal crops. Research shows that high-tech greenhouses have the biggest positive impact on the UN Sustainable Development Goals compared to all other growing systems and score highest within water and nutrient efficiency. The use of stone wool Precision Growing media in a greenhouse can produce higher yields with significantly less resources than other cultivation methods. The key is precision. The essence of Precision Growing is the use of less soil, less water, less fertiliser, lower CO₂ emissions, and gaining a higher yield.

Combined with stone wool growing media, Grodan enables Precision Growing by offering a sensor system, a software platform and personal advice to help maximise crop potential with data-driven cultivation. Grodan's innovative growing media solutions facilitate the sustainable production of healthy, safe, and fresh food produce. Furthermore, it creates the possibility to use biocontrol and reduce, or even eliminate, the use and risk of chemical plant protection products.

Sustainability plays a prominent role within Grodan, from the manufacture of stone wool growing media to end-of-life solutions.

Disclaimer

Although all our information and advice is compiled with the greatest possible care and attention to detail and includes the latest technical developments, we cannot accept any liability for the contents.

Grodan is part of ROCKWOOL B.V.; the general conditions of sale and delivery of ROCKWOOL B.V. apply to all information and advice supplied by us and to the agreements we enter into and to the delivery of all our products. These general conditions have been filed with the Limburg Chamber of Commerce under number 13014428 and may be obtained free of charge from Grodan. For the conditions and extra information on the Kiwa Product certificate we refer you to www.grodan.com.

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1 About this document

This user manual contains advice and guidelines on the cultivation of medicinal crops using Grodan products. Optimal cultivation results can only be achieved if Grodan products are used according to the instructions and guidelines provided in this user manual.

This user manual has been composed with great care. The contents of this manual are based on Grodan's knowledge of our products' properties and of the specific requirements that they must meet in practice.

This edition of the user manual replaces all other previously published information.

1.1 Intended reader

Grodan products are intended for medicinal crop growers.

If you intend to propagate other crops, contact Grodan to ask for the applicable guidelines.

1.2 Symbols used in this manual

This manual contains symbols that indicate useful information that complements the instructional text and illustrations. Familiarise yourself with the following symbols before reading the rest of this manual:

Symbol	Meaning
 CAUTION!	Indicates a hazardous situation that could result in moderate or minor injury.
 NOTICE	Indicates a situation that could result in product damage.
 SAFETY INSTRUCTIONS	Reference to the safety instructions in §3 of this manual.
	Reference to another chapter or paragraph within this manual.
	Reference to the appendices or to an external document.

1.3 Terminology

This user manual contains technical terms to describe important processes or parts.

Familiarise yourself with the following terms before reading this manual:

1.3.1 Nutrient solution

The water-based solution that contains all macro and micro nutrient elements that are essential to plant growth and development in the absence of soil. Nutrient solution is used to wet Grodan products.

1.3.2 Wetting

The act of saturating a Grodan product with nutrient solution.

1.3.3 Water content (WC)

The amount of water that has been absorbed by a Grodan product after being saturated with the nutrient solution. WC is expressed as a percentage of the maximum amount of water the product can absorb.

1.3.4 Electrical Conductivity (EC)

EC is a measure of the total salts concentration in the nutrient solution. EC is therefore a mixture of essential (e.g. NO_3^- , Fe^{3+}) and non-essential (e.g. Na^+) elements required for plant growth.

1.3.5 pH

pH is a measure of how acidic or basic the nutrient solution is. pH plays an important role as it influences the availability of nutrients in the solution to the plant. The pH of the nutrient solution should be within range 5.2 – 6.0.

1.4 About Grodan

Grodan – part of the ROCKWOOL group – was founded in 1969 and is active in more than seventy countries worldwide. The head office is located in Roermond, the Netherlands.



Contact our customer service if you have any questions about this user manual:

			
North-West Europe	ROCKWOOL B.V. /	+31 (0)475 35 30 40	
Benelux	Grodan	+31 (0)475 35 30 20	
Spain, Portugal, South-Korea and Latin America	Industrieweg 15 P.O. Box 1160 6040 KD Roermond The Netherlands	+31 (0)475 35 38 57	+31 (0) 475 35 37 16
Central and East Europe Mediterranean Middle East Asia Pacific Gulf region South Africa	Grodan (ROCKWOOL Polska Sp. z o.o.) Postępu 6 02-676, Warsaw Poland	+48 22 375 07 80	N.A.
North America	Grodan (ROXUL Inc.) 8024 Esquesing Line Milton, ON L9T 6W3 Canada	+1 800 872 2476 (toll free) +1 905 636 0611	+1 905 636 1901

1.4.1 Online

	North America	Europe
	info@grodan101.com	info@grodan.com
	www.grodan101.com	www.grodan.com
	www.linkedin.com/company/grodan101	www.linkedin.com/company/grodan
	www.twitter.com/grodan101	www.twitter.com/grodan
	@grodan101	@grodaninternational
	www.facebook.com/Grodan101	www.facebook.com/Grodaninternational
	www.youtube.com/@grodan1014	www.youtube.com/user/Grodansubstrates

1.5 Warranty

Grodan warranty terms and conditions apply to all Grodan products.

Any product defects or performance issues must be reported to a Grodan account manager or via an official complaint procedure.



Information about the Grodan complaints procedure can be found in §6.3 of this manual.



More information about the warranty terms and conditions can be found at www.grodan.com/general-terms-of-sale-and-delivery.

2 About this product

This chapter contains the information that is necessary to understand the function and design of your Grodan product.

2.1 Intended use

Grodan Blocks are intended to be used to cultivate medicinal crops.

If you wish to cultivate other crops, please contact Grodan for custom guidelines.

Grodan Blocks are intended for professional use.

2.1.1 Unintended use

Grodan Blocks are not intended to be used to cultivate anything other than plants.

Grodan Blocks are not intended to be used outside of the recommended pH and EC ranges.

2.2 Design & function

Successful plant cultivation depends on the growing medium in which a plant can develop. Grodan Blocks have been designed to promote fast germination and root development for medicinal and various vegetable crops, using the unique qualities of stone wool.

2.2.1 Key properties

Grodan has designed high quality stone wool blocks to provide the following benefits to medicinal and vegetable crop growers:

- The blocks are available in various types, dimensions and quantities to ensure a good solution for the grower's cultivation methods.
- Suitable and able to adapt to traditional and automated production processes in both indoor and greenhouse facilities.
- Able to adapt to variable climate conditions, as well as different nutrition and irrigation regimes, in order to promote optimum germination and plant growth such that the young plants can be delivered to the precise specification of the customer.
- Unparalleled support from Grodan's network of dedicated crop Technical Advisors.

2.2.2 Stone wool

Grodan Blocks are made of stone wool: a natural material made from basalt rock. During production, the basalt is heated to 1500 °C / 2750 °F and spun into long fibres to create a wool-like structure. The result is a lightweight, absorbent material that is ideal for the cultivation of plants.

Stone wool offers many benefits to Grodan Blocks:

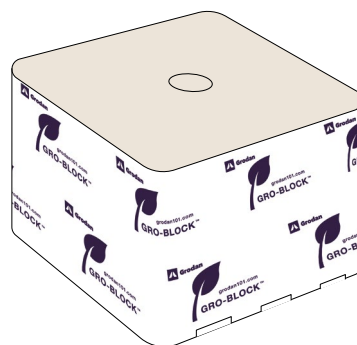
- Lightweight and easy to handle. At the same time, the blocks are structurally sound, making them ideal for the automated process of seeding and transplanting.
- Water and nutrients will not bind to the stone wool fibres, meaning all the water and nutrients added to the block are available for plant growth.
- Contains no pathogens or unwanted seeds due to the manufacturing process.
- Unique hydrophilic fibres that allow for rapid and even water distribution throughout the entire block. This gives the blocks excellent buffer and re-saturation capability.
- Homogenous growing medium, ideal for precise application of water and nutrients for consistent plant growth.

2.3 Block types

Grodan Blocks are available in different types. Each type of Grodan Block has its own strengths and can offer specific benefits to the cultivation process depending on the requirements of the customer.

Disclaimer: Check with your local Grodan Account Manager on the availability of blocks in your region.

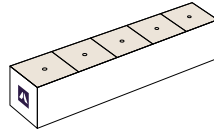
2.3.1 Grodan Improved



Grodan Improved Gro-blocks have the following characteristics:

- Available as loose blocks or attached on a strip.
- Available with a groove pattern on the bottom to allow effective use in different cultivation systems.
- Available with one (1) plug hole to facilitate efficient transplanting of a fully rooted Grodan A-OK or Grodan Macro plug.

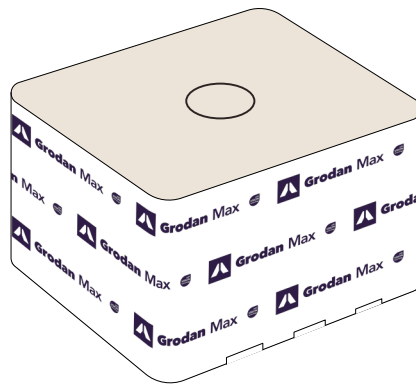
2.3.2 Grodan Improved Mini Blocks (MM)



Grodan Improved Mini Blocks (MM) have the following characteristics:

- Available as blocks attached on a strip.
- No grooves on the bottom.
- Available with one (1) hole in the center

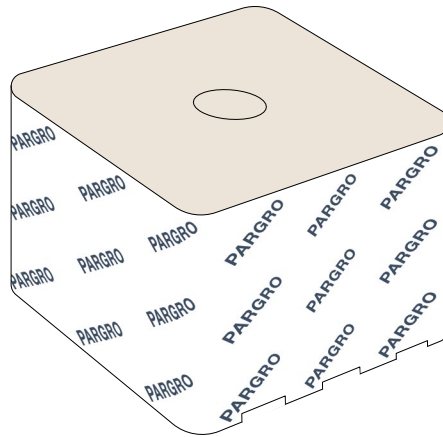
2.3.3 Grodan Max



Grodan Max blocks have the following characteristics:

- Available as loose blocks or attached on a strip.
- Available with a groove pattern on the bottom to allow effective use in different cultivation systems.
- Available with one (1) plug hole to facilitate efficient transplanting of a fully rooted Grodan A-OK or Grodan Macro plug.

2.3.4 Pargro



Grodan Pargro blocks have the following characteristics:

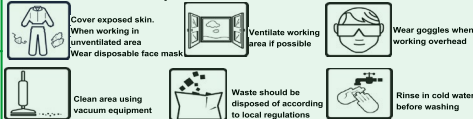
- Available as loose blocks.
- Available with a groove pattern on the bottom to allow effective use in different cultivation systems.
- Available with one (1) plug hole to facilitate efficient transplanting of a fully rooted Grodan A-OK or Grodan Macro plug.

2.4 Product label

The product label contains important information about a delivery of Grodan Blocks. The product label is attached to the packaging of individual pallets and applies to all blocks on the pallet.

If there are any problems during use of the block, essential data can be recovered using this label. Always retain and store the product label. Make sure that each label can be matched with the blocks it applies to.

The product label contains the following information:

A	286605				Grodan Grodan Inc. 8324 Enterprise Lane Mississauga, Ontario Canada L5T 6Y3 Telephone: +1 905 838-0811 www.grodan.com Made in Canada	E
B	GR6,5 40/40*1 MID		GRO BLOCK, IMPROVED GR6,5			
	Length 100 MM	Width 100 MM	Height 65 MM	Contents 12 CAR/PAL	Retrievalcode: 48167206 1	F
C	WITH HOLE, NO WRAP 4" X 4" X 2.5" Pack Count: 432 Blocks/Strip: 6					G
D	 Cover exposed skin. When working in unventilated area. Wear disposable face mask. Ventilate working area if possible. Wear goggles when working overhead. Clean area using vacuum equipment. Waste should be disposed of according to local regulations. Rinse in cold water before washing.				 7 74783 49532 1	H

- A Product identification number and name
- B Product dimensions and quantity per pallet
- C ROCKWOOL Logistic Warehouse Management bar code
- D Safety symbols and information
- E Grodan contact information
- F Retrieval code
- G Product description and specifications
- H EAN or UPC-A bar code of the Stock Keeping Unit (SKU)

2.4.1 Retrieval code

The retrieval code on the product label (F) is very important. This eight (8) digit code can be used to identify the product during troubleshooting.

Make a separate note of the retrieval code and a reference to the products it applies to.

2.4.2 Tracing code

Grodan products are also given a tracing code. This code can be used to identify the exact moment of production of individual products.

The tracing code is printed on the foil wrapping of individual Grodan products.

2.5 GroSens system

The GroSens system enables 24/7 real-time insight into the WC, EC and temperature of the stone wool growing media. This provides valuable, timely information and guidance for optimising the irrigation strategy, allowing professional medicinal and vegetable cultivators to optimise the moment of irrigation in line with generative / vegetative plant steering.

In combination with Grodan stone wool growing media and advice, the GroSens system makes it possible for the grower to deliver the required plant health and yield. You can connect the GroSens sensor to our e-Gro platform for additional insights.

 For more information about the application of GroSens, please refer to the Grodan GroSens installation manual or speak with your Grodan Account Manager.

3 Safety

This chapter contains the information that is necessary to safely use your Grodan Blocks.

3.1 Safety symbols

The following symbols are shown on the product label:

Symbol	Meaning
	Ventilate closed areas when working with Grodan products if possible.
	Dispose of waste material according to local regulations.
	Cover exposed skin when working with Grodan products. Wear a (disposable) face mask when working with Grodan products in an unventilated area.
	Clean the area using vacuum equipment after working with Grodan products.
	Wear safety glasses when handling Grodan products overhead.
	Rinse your hands in cold water before washing with soap after working with Grodan products.

3.2 Personal protective equipment (PPE)

The mechanical effect of fibres in contact with the skin or eyes may cause temporary irritation. This is why certain personal protective equipment is advised when working with Grodan products.

3.2.1 Eye protection



⚠ CAUTION!

When handling Grodan products overhead, there is an increased risk of stone wool particles falling into your eyes.

- ▶ Wear safety glasses when handling Grodan products overhead.
 - ▶ EN166 standard safety glasses are advised.
-

3.2.2 Skin protection



⚠ CAUTION!

When handling Grodan products, the abrasive effect of fibres can cause temporary irritation, especially on sensitive skin.

- ▶ Cover exposed skin when working with Grodan products.
 - ▶ Wear protective gloves to cover your hands. EN388 standard safety gloves are advised.
 - ▶ If necessary, wear a protective overall to cover any other exposed skin.
-

3.2.3 Respiratory protection



⚠ CAUTION!

Working with Grodan products in an unventilated area, or during operations that can release extra stone wool particles, can cause shortness of breath and irritation to the respiratory system.

- ▶ Wear a (disposable) face mask when working with Grodan products in an unventilated area.
 - ▶ EN 149 FFP1 standard masks are advised.
-

NOTICE

At high temperatures (> 175 °C) the binder will slowly decompose and trace gases will be released over a shorter period. Gases should be vented and appropriate respirators with a separate air supply should be used. These temperatures are usually not found in horticultural applications.

3.3 First aid procedures

As with all products, make sure to refer to the regional safety data sheets or safe use instruction sheets (available on request) and follow all PPE recommendations.

In rare circumstances some people may experience sensitivity or irritation of the throat, lungs, skin, or eyes when working with Grodan products. If irritation does occur, follow the first aid procedures in the table below.

⚠ CAUTION!

In case of irritation of throat or lungs, do not leave the affected person alone.

Irritated area	First-aid procedure
Throat, lungs	1 Move to a location with fresh air. 2 Remain calm. Flush your mouth with water. 3 Blow your nose. 4 Drink plenty of water afterwards.
Skin	1 Remove any clothing that came in contact with stone wool fibres. 2 Rinse the irritated skin under running water. 3 Wash the irritated skin with mild soap and water. Use a washcloth to help remove the stone wool fibres. 4 Do not rub or scratch the area.
Eye(s)	1 Do not rub the affected eye(s). 2 If applicable, remove contact lenses. 3 Hold the eyelids apart and flush the eyes with plenty of water for at least 15 minutes.

Seek medical attention if symptoms of irritation persist after following the first-aid procedures.

4 Transport and storage

This chapter contains the information that is necessary to safely transport and store your Grodan products.

SAFETY INSTRUCTIONS

Make sure you have read and understood the safety instructions in §3 of this manual.

4.1 Delivery or collection

4.1.1 Delivery by truck

Grodan Blocks can be delivered to your facility by truck (where applicable) or picked up at your local hydroponics dealer, either on a standard pallet or in standard cartons.

The customer is responsible for checking the delivery:

- The correct amount of pallets or cartons have been delivered.
- The outside packaging is not damaged.
- A legible product label is present on each pallet or carton.

If shipment is arranged by Grodan, the customer must sign the CMR shipping form. The CMR shipping form is provided by the transport company. Any issues with the delivery must be noted on the CMR shipping form.

4.1.2 Delivery by container

Grodan products that were transported overseas are often delivered by shipping container. Container deliveries require immediate and thorough inspection in order to identify and report potential water damage in time.

Inspect the products and container for the following criteria:

- The outside of the container is undamaged.
- No water is present in the container and the products are completely dry.

NOTICE

If your delivery fails to meet any of these criteria, contact your Grodan Account Manager or Customer Service right away.

4.2 Handling the product on-site

After the products have been delivered, you can transfer them to a storage location or directly to the application area.

NOTICE

Minimise the amount of times the product is transferred to reduce the risk of product damage.

When handling the product:

- 1 Lift a pallet. Use a forklift or pallet truck.

⚠ CAUTION!

- ▶ Do not puncture the products on the pallet with the forks of a forklift truck.
- ▶ Do not stack pallets higher than three (3).

- 2 Transfer the pallet to the desired location.

⚠ CAUTION!

- ▶ Do not drive too fast.
- ▶ Do not transfer the pallets by pushing them across the floor.

4.3 Storing the product on-site

Grodan Blocks must be stored in a location that meets the following requirements:

- Indoor
- Dry
- Ventilated and free of dust
- A flat, level floor without bumps or dents
- No direct sunlight
- No potential sources of contamination:
 - Rodents, insects, birds or other animals
 - Plant protection products or growth hormones
 - Exhaust fumes
 - Dust
 - Frequent human activity

Follow these instructions when storing Grodan products:

- ▶ Store the products on the pallet and in their original packaging, with the product label clearly visible.
- ▶ Transport the pallets to the storage location according to the instructions in §4.2.
- ▶ Do not stack the pallets more than three (3) high to prevent damage.

5 Installation

This chapter contains the information that is necessary to safely prepare your Grodan Blocks for use.

SAFETY INSTRUCTIONS

Make sure you have read and understood the safety instructions in §3 of this manual.

5.1 Removing the packaging

To remove the packaging from your Grodan products:

- 1 Remove the product label from the plastic packaging wrap around the pallet.
- 2 Store the product label in a secure location. The label serves to identify the moment of production and will need quoting in any correspondence with Grodan.



Make sure that the label can be matched with the products it applies to (see §2.4).

- 3 Make a separate note of the retrieval code and a reference to the products it applies to.
- 4 Remove a sample of five (5) blocks from the pallet and store them together with the product label. These samples may be used as reference material in any correspondence with Grodan.
- 5 Remove the plastic foil from the entire pallet.
- 6 Remove the plastic wrapping which secures the blocks to the pallet during transportation and storage.
- 7 Cut and remove the plastic straps from around the wooden frame.
 - Use a pair of scissors.
 - Be careful not to damage the foil wrapping of the blocks.
- 8 Remove the wooden frame from the top of the pallet.
- 9 Lift and remove the blocks from the pallet.

NOTICE

- *Ensure the boxes remain upright as you remove them from the pallet.*
- *Take care not to damage the plastic foil from around the blocks.*

5.2 Saturating the product

The initial saturation of Grodan Blocks is crucial to the success of the cultivation process. It forms the foundation for root development and growth of the plant. To guarantee successful use of your Grodan Blocks, it is essential that you follow the wetting instructions below.

5.2.1 Preparing the nutrient solution

To saturate the stone wool blocks, prepare a balanced nutrient solution:

- with an EC level of 1.5 - 3.0 mS/cm EC
- with a pH adjusted to 5.5 - 6.5 pH.
- with a nutrient solution temperature of 68 °F / 20 °C

NOTICE

Ensure that the pH of the nutrient solution is not lower than 5.2. A lower pH used during initial saturation and at any time in the cultivation process will dissolve the stone wool fibres resulting in a loss of structural integrity.

5.2.2 Saturating the blocks

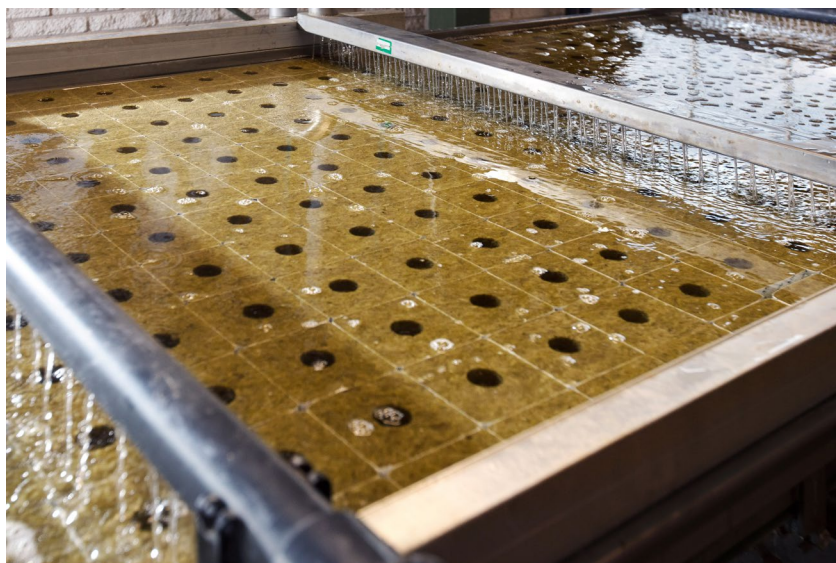
The preferred method of saturating the Grodan blocks is submersion or by overhead spray / wetting line.

Submersion:

- 1 Fill a container with the nutrient solution to a level that will ensure the blocks will be fully covered by the nutrient solution.
- 2 Place blocks into the container and allow to sink or submerge in the solution. Approximate sinking times are listed in the chart below.
- 3 Keep blocks submerged until bubbling stops.
- 4 Remove the blocks from the solution and place on the bench with the grooves in the direction of the drain to enable excess nutrient solution to drain from the blocks.

Wetting line / overhead spray:

Example of an automated wetting line (shown for illustrative purposes only)



Ideally the wetting line should have an 'open belt conveyor'. This allows the applied nutrient solution to drain fully from the blocks as they pass from beam to beam. The open belt system prevents air from being trapped inside the block and ensures an even distribution of nutrient solution.

In addition, it is advised, that the wetting line should contain five (5) spray beams. The distance between the beams should be 50 cm. The belt speed should be 5 cm/second with a water pressure of 2.5 bar (measured at the spray beam) and a nutrient solution temperature of 20°C. These variables are interdependent on to one another. As such, a change in one will require a change in all to achieve the desired outcome.

Place the blocks on the conveyor belt ensuring that the plant holes face upwards.

NOTICE

Check the beams regularly for (partial) blockages.

It is your responsibility to ensure that a balanced nutrient solution was applied at the intended EC and pH level. However, as a simple check it is advised that you check EC and pH levels following initial saturation.

5.3 Evaluating the saturation process

To evaluate if the blocks have been correctly saturated, select ten (10) blocks from the wetting line. Weigh each block individually and obtain an average weight.

NOTICE

As a rule of thumb, the minimum weight of a saturated product is 85% of its volume.

For specific wet weight advice for each product line, please refer to the Grodan Grow Guide for Cannabis available at: www.grodan101.com

5.4 Planting in a Grodan Block

Once a Grodan Block is correctly saturated, a seed or plug / transplant can be planted / placed in it.

NOTICE

The instructions in this chapter only describe the planting activities that are unique to Grodan Blocks. After a seed or plug / transplant is planted in the block, it will need special care to develop into a mature plant. This care is the responsibility of the grower.

6 Troubleshooting

This chapter contains the information that is necessary to identify and solve challenges that may be experienced when working with Grodan Blocks.

6.1 Common challenges

The most common challenges that may be experienced when working with Grodan Blocks are listed in this section.

NOTICE

- *This section only describes challenges that are directly related to the design and function of Grodan products.*
- *If you experience a problem with your Grodan product that is not described in this section, please contact your Grodan Account Manager or the Grodan Customer Service (see §1.4).*

Use the following table to identify the cause of the challenge and follow the instructions to resolve it:

Challenge	Cause	Solution
The product does not reach the correct WC. The weight after initial saturation is below the minimum weight stated in §5.3.	The saturation process was not performed correctly.	Check if you have followed the steps in §5.2 of this manual correctly. Perform the sinking test described in §6.2.
The product is damaged. The product is contaminated.	The product has been transported or stored incorrectly.	Do not use a damaged or contaminated product. For future transport: ► If the product was damaged upon delivery from Grodan, please contact the Customer Service department for your region (see §1.4). ► If the product was damaged after delivery to your facility, follow the instructions in §4 to prevent damage during storage or transport.

6.2 Performing a sinking test

The sinking test is used to check the water uptake speed. Perform the test as follows:

- 1 Prepare a testing container:
 - Sized at least 200 × 200 × 200 mm.
 - Filled with clean tap-water of 20 °C (±1 °C).
- 2 Remove all attached paper and foil from the block.
- 3 Have a timer (accuracy 1 s) ready to start.
- 4 Carefully place the block in standard orientation in the middle of the water surface, and start a timer as soon as the block touches the water.
 - If the block touches the side of the tank at some point during the test, the test results are invalid. Redo the test with a new sample.
- 5 Stop the timer as soon as the block is fully submerged. The time shown on the timer is the sinking time.
- 6 Weigh the block to check if the block reaches the proper saturation percentage (>85%). See www.grodan101.com for an overview of the sinking time and wet weight for each type of block.

When performing multiple tests, make sure the water does not get contaminated. As a rule of thumb, you can test as many samples as the amount of liters in your tank before you have to refresh the water in the tank.

6.3 Complaints procedure

When an issue occurs when working with Grodan Blocks that may be related to transportation, delivery, and/or the material or production quality of the block, the following complaint procedure allows Grodan to efficiently resolve the issue as quickly as possible.

To submit a complaint to Grodan, follow this procedure:

- 1 Collect the following information:
 - The retrieval code that was printed on the product label (see §2.4).
 - The tracing code that is printed on the foil wrapping of the product (see §2.4.2).
 - A detailed description of the problem you are experiencing.
 - Photos or videos that help describe the problem.
- 2 If the problem is related to plant growth:
 - Collect 0.5 – 1 litre of nutrient solution from both affected and unaffected products. Store the liquid in a cool, dark place.
 - Collect a sample of at least 20 affected blocks to show to your Grodan Account Manager, Grodan Business Support expert or dealer.
 - Collect a sample of at least 20 unaffected blocks.
- 3 Immediately report the problem to your Grodan Account Manager or to a local representative of the Grodan Customer Service.
- 4 Together with your Grodan contact, decide on the best way to address the problem in order to minimize any direct and consequential loss.

NOTICE

A Grodan Account Manager or Grodan Customer Service representative will collect relevant information to the complaint handling. To identify the cause of the problem, it is important for the Grodan employee to have access to the location where the Grodan Block is used.

7 End of Growing Cycle

This chapter contains the information that is necessary to safely decommission and prepare your Grodan products for recycling or disposal.

SAFETY INSTRUCTIONS

Make sure you have read and understood the safety instructions in §3 of this manual.

7.1 Confirm proper classification

- 1 Confirm with your local and proper regulatory body overseeing legal cannabis cultivation that growing media is not considered cannabis waste.
- 2 Confirm with the local waste authority that Grodan products are categorized as non-hazardous solid waste.

Always follow local rules and regulations when disposing of Grodan products.

7.2 Recycling Grodan products

Grodan products have a number of value added applications where the material can be used and recycled at the end of the growing cycle. Examples of some of these applications are listed below.

- Compost
- Potting Mix
- Strengthening additive for brick clay
- Use in re-cultivation
- Industrial bedding
- Re-processed into new stone wool

Reach out to local waste haulers and agricultural or organic recycling operators to determine best recycling option available in your area. For more information, please visit: www.grodan101.com/about-grodan/recycling-solutions/

NOTICE

The available recycling applications may vary depending on your country or region.

The organizations listed are independently operated service providers. Grodan does not guarantee recycling availability nor quality of service. It is up to the grower to determine and or negotiate the relationship with potential recycling operators.

7.2.1 Managing the WC

To reduce the recycling or disposal costs, leave your Grodan products to dry after decommissioning.

7.2.2 Self processing

Some recycling operators may require additional processing for the Grodan products to be recycled at their facilities. Additional processing includes removing foreign materials and or de-sleeving.

- 1 Remove any foreign materials from the stone wool, for example:
 - Plastic clips
 - Wood
 - Metal
 - Stone
 - Twine
- 2 Dispose of each foreign material in the corresponding waste stream.
- 3 Collect the stone wool in a container.

7.2.3 Transporting to a recycling or disposal facility

Once prepared for recycling, Grodan products should be collected and stored in a separate container.

If sending the used Grodan products to a disposal facility, follow all non-hazardous solid waste guidelines. Grodan products can be collected and disposed of with other non-hazardous solid waste materials as permitted by local regulations.

NOTICE

Always follow local rules and regulations when recycling or disposing of Grodan products.

Only use registered haulers with your local municipality that are legally authorized to handle non-hazardous solid waste or recycling materials. Confirm with your municipal board if you have any questions.

In some markets, consumers have the option to self-haul materials to a recycling facility and/or a disposal site. If this is a desirable option, confirm with your municipal board before proceeding.

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