



# EXXcellent

Stone wool slab for professional vegetable growing

## Product description

Cultilene EXXcellent is a stone wool slab that is made with the X-fibre technology. Instead of the usual horizontal or vertical fibre orientation, the fibres using this technique are orientated in all directions throughout the substrate. In this way, two advantages are combined: a rapid root development supplied by a vertically oriented fibre structure and a better root volume throughout the substrate supplied by a horizontally oriented fibre structure. EXXcellent is a sturdy slab with a higher density that contributes to the good management of vegetative growth.

## Product application

Cultilene EXXcellent slabs are used for growing vegetable crops under glass or plastic.

## Guarantee

The guaranteed lifespan for vegetable growing is one crop if used under normal growing conditions.

EXXcellent is produced under RHP certification. The RHP certificate is a quality agreement between the stone wool suppliers and the Dutch trade association for the plant reproduction material sector. The KIWA certification agency regulates this certification scheme. Further information can be found at the RHP website: [www.rhp.nl](http://www.rhp.nl).

## Product characteristics

The EXXcellent slab is just one of the solutions from Cultilene for growing plants. This controllable water buffer has the following characteristics:

Parameter	
Time required to sink	Class 1 RHP < 25 sec
Nominal water content – at drainage	90%
Nominal water content – pF1	65%
Control range *	45 – 80%

\*Indication of average values in practice.

The RHP standard applies to the minimum values.

## Technical details

### Physical requirements

Parameter	
Organic matter	1,0 – 5,5%
Bulk density at delivery	50 kg/ m <sup>3</sup> *
Relative compression (RC)	≤ 30% at 5 kPa
Recovery capacity	≥ 98% +/- 2% at 5 kPa
Pore volume	≥ 95%

\* Tolerance +/- 10%.



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## Chemical requirements

Parameter	Norms
EC	≤ 0,5 dS/m
pH in nutrient solution	5,5 – 7,0 If pH ≥ 7,0 determination acid binding value
Acid binding value	If pH ≥ 7,0 determination acid binding value Just before pulse 1: pH ≤ 7,5 and acid use ≤ 5,00 mmol hydrochloric acid/kg. Just before pulse 10: pH ≤ 6,0 and acid use ≤ 0,50 mmol hydrochloric acid/kg.

## Substrate tolerances

The following tolerances apply to the nominal dimensions of the final product (dry product):

### Dimensions of slabs

Length	+ / - 7 mm
Width	+ / - 5 mm
Height	+ / - 5 mm

### Plant holes in slabs

Centre-to-centre spacing	+ / - 2 mm
Position of first hole	+ / - 10 mm
Centre hole to slab edge (side)	+ / - 10 mm
Depth of hole	+ / - 3 mm
Diameter of hole (round holes)	+ / - 2 mm
Length x width (other holes)	+ / - 2 mm

## Standard product dimensions

The most commonly used dimensions for EXXellent slabs are a combination of the following length, width and height measurements:

Length (mm)	Breedte (mm)	
	<b>150</b>	<b>195</b>
<b>1000</b>	75   100	75   100
<b>1200</b>	75   100	75   100
<b>1330</b>	x	75
<b>2000</b>	75	75

Alternative sizes are available on request.

If desired, the EXXellent slabs are provided with plant holes. After production and processing, the slabs are stacked on pallets and prepared for transport.

## User instructions

EXXellent slabs are delivered in standard packaging on standard pallets (1200 x 1000 mm). Different pallet sizes are available on request.

The pallets must be stored dry (indoors).

Pallets must be stacked no more than 4 high, and we would like to emphasise that the safety rules that apply to stacking pallets must be observed. Ensure the prevention of damage to the packaging material.

EXXellent slabs must be completely saturated with water before use. Leave the slabs for a minimum of 24 hours (preferably 48 hours) fully saturated with water at the EC and pH prescribed for your crop.



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Then make the drainage slits within 24 hours before planting. The position of the drainage slits in combination with the correct dose size will influence the distribution of water and EC in the slab and the drainage of elements. It is important to minimize the fluctuations in water content and EC throughout the whole slab because these fluctuations will have a major impact on the root distribution in the slab.

Making drainage slits is a measure that must be done with care because it will influence the growth of the plant for the rest of the season.

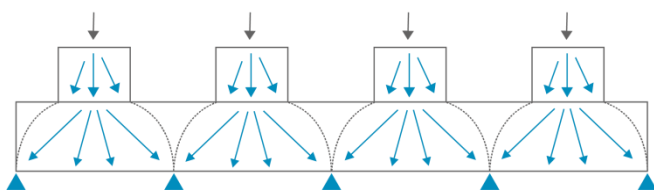
The objective is to get a homogeneous water content and EC throughout the slab. If extra drainage slits are made later during cultivation, the distribution of water and EC in the slab will change and this will have impact on the quality of the roots.

Additional tips for making drainage slits:

- make drainage slits at the lowest point on both ends of the slab. The drainage slits located between the ends must be made exactly between the cubes;
- this results in an even drainage pattern throughout the slab so that water and fertilizers can be refreshed more effectively and more efficiently;
- if the slab is not absolutely level when using hanging gutters, drainage slits can be made on both sides to ensure the drainage is the same throughout the slab.
- all drainage slits must run to the bottom of the slab and have to be high enough (3 – 4 cm). In order to prevent the roots from restricting the flow of drainage water;
- never make a drainage slit under a dripper as this can lead to 'false drainage'.

The target level for moisture content is between 50% and 80% of the volume.

▲ = Drainage slit    ↓ = Dripper



Please refer to the Cultilene Framework for more information about the propagation and growing phases. This can be found by using the Cultilene Smart Root Zone Management App and at [app.cultilene.com](http://app.cultilene.com).



## Practical instructions

Each pallet has a pallet label with information such as the production order number, item number, product description and product characteristics.

Cultilene		
1851444-H5103-PHS-001		
Itemcode	Dimensions (LxWxH)	Contents
H5103-PHS	1000 X 195 X 75	192 STUKS
Delivery Address		Cultilene® EXXellent Ingetuid plantg.folie
Cultilene® EXXellent wrapped pt.holes foil		
<b>Productie:</b> Substraat van wateropneembare minerale wol <b>Samenstelling:</b> Hoofbestanddeel: Minerale steenwol toevoeging binder, bereidings <b>Eigenschappen:</b> Bulk-dichtheid voor aflevering 50 kg/m <sup>3</sup> Porositeit: 95% Watergehalte bij uitstak: 92 Luchtdichtheid bij uitstak: 0,46 % <b>Veiligheidsinstructie:</b> Aansluiting cradle gebruik, uitsluitend gebruik dient te worden voorkomen. Zie ook de "Toelichting instructie"	Substrate from water absorbing mineral wool <b>Composition:</b> Main constituent: Mineral Stone wool additives binder, setting agent <b>Properties:</b> Bulk density prior to delivery: 50 kg/m <sup>3</sup> Pore Volume: 95% Water content by drain: 92 Accurancy by drain: 0,46 % <b>Safety instruction:</b> Touch without danger, inner use should be prevented. See also "Practical instructions for use"	
NR 3759 MADE IN CZECH REPUBLIC		
Leverdatum / ingebruik: 1 jaar / Annual		
RHP - K23900 Support de culture NFU 44551 - Origine EU		

- Production order number (last three numbers are the pallet number)
- Article number / size of the slab / slabs per pallet
- Description of the slab
- Certificate RHP (independent product control)
- Product characteristics

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## Environmental, health and safety concerns

### Environmental concerns: recycling

Cultilene devotes a great deal of attention to the recycling of raw materials, both at our own production locations and, after use, at growers' locations. The recycled stone wool can be used, for example, in the production of bricks.

For more information about the recycling of your stone wool, you can contact your Cultilene representative.

### Health concerns

If you are in direct contact with stone wool substrate, we advise you to wear gloves. In insufficiently ventilated spaces, we advise the use of a face mask. Wash your hands before and after handling the stone wool substrate. You can best do this by first rinsing your hands with water to get rid of the dust. Then wash your hands with soap.

Stone wool from Cultilene is a 'mineral wool' produced in certified EUCEB factories. EUCEB certifies the conformity of stone wool fibres with Note Q of Regulation (EC) No. 1272/2008.

### Safety concerns

If needed, we can supply you with the General Safety Information Sheet for Stone Wool (SUIS).

## Certification

All Cultilene production and manufacturing sites in Europe are certified with the ISO 9001 & 14001 standards.

In addition, EXXellent is included in the RHP certification (MOD550 stone wool substrate).

## Questions or remarks?

For questions about Cultilene EXXellent slabs, you can contact:

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