All product information which we provide has been prepared by us to our best knowledge and belief. Our information documents therefore make no claim to completeness and correctness. In particular, we reserve the right to make changes.

The variations in the chemical properties of substrates lie in the tolerance range given in the guidelines of the German Gütegemeinschaft Substrate für den Pflanzenbau e.V. (Quality Assurance Association Growing Media for Plant Cultivation).

All application and usage recommendations must be understood as non-binding guidelines and must be adjusted to meet local circumstances and code of practice.

Store product in a cool place, protected from direct sunlight and precipitation, otherwise guarantee is rescinded.

Any liability for the presence of saprophytic organisms and related effects, e. g. development of mycelium, cannot be accepted.

Klasmann-Deilmann GmbH
Georg-Klasmann-Str. 2–10 · 49744 Geeste · Germany
Tel. + 49 (0) 5937 31-0 · Fax + 49 (0) 5937 31-279
info@klasmann-deilmann.de · www.klasmann-deilmann.com

KLASMANN DEILMANN
we make it grow

easy growing

The substrate range

Concept and realisation: www.prahl-recke.de · January 2011

KLASMANN

Klasmann easy growing
Quality in every detail

Klasmann easy growing is a full range of growing media perfectly ready for use in a wide range of commercial horticulture applications.
Substrates of the Klasmann easy growing line have proven themselves time and again under widely varying conditions and are the substrates most often requested by our customers around the world.

Successful and yet not complicated
All important success factors required for a substrate were incorporated into the development of our Klasmann easy growing product line: extensive knowledge and years of experience with crops and growing methods, full overview of all available raw materials, additives and fertilisers as well as top expertise in raw material processing and substrate blending. Nobody can make substrates better.
The Klasmann easy growing range includes the Klasmann substrates that are highly successful around the world. Each product has a fully tried and tested composition and has proven itself in many applications. The Klasmann easy growing line therefore satisfies the fundamental requirements of the successful commercial nursery: fully developed, practically proven substrates for trouble-free growing with a high degree of certainty.

Content

New from Klasmann easy growing

Klasmann GreenFibre is a very high quality wood fibre product which has undergone heat and physical treatment to ensure it satisfies the particular requirements of different fields of use:
· Klasmann GreenFibre medium – for potting substrates
· Klasmann GreenFibre coarse – for container substrates
· Klasmann GreenFibre organic – certified organic quality

In combination with high quality peat moss, Klasmann GreenFibre is an optimum constituent of structurally stable growing media.

Klasmann GreenFibre:
· is an organic raw material obtained from sustainably managed forests
· increases air capacity
· ensures long term structural stability
· enhances drainage capacity
· improves re-wettability
· promotes healthy and fast root development
· is ideal for organic substrates
· reduces transport costs due to its low weight

TerrAktiv

TerrAktiv is a top quality green-compost which is produced under controlled conditions on Klasmann-Deilmann's own premises. During the rotting process, bio dynamic substances are added to promote microorganism activity. Colonisation by predatory mites aids biological control of the fungus gnat in the greenhouse. TerrAktiv satisfies RAL criteria, the requirements of the R.H.P. foundation and EU organic standards.

TerrAktiv:
· is biologically active
· helps to suppress root diseases
· enables better shelf-life of potted herbs

TerrAktiv FT

TerrAktiv FT is the result of systematic development of TerrAktiv into an organic fibre product which is fermented in a special process. The fermentation stabilises the organic fibres and mobilises the added organic nutrients. TerrAktiv FT is the ideal additive for organic substrates.

TerrAktiv FT:
· is nitrogen stable
· increases air capacity
· optimises root development

Klasmann Hydro S

Klasmann Hydro S is the wetting agent with excellent long-term action that maximises benefits in terms both of initial wetting and of re-wetting after dry cultivation.
Especially when propagating young plants in tray systems and when using substrates in capillary irrigation systems, Klasmann Hydro S helps ensure reliable cultivation.

The composition of the Klasmann Hydro S wetting agent, which is used in many substrates in the Klasmann easy growing product line, has now been optimised further:
· Even more rapid water uptake
· Optimised water distribution in cultivation containers
· Enhanced long-term action

In field trials, Klasmann Hydro S consistently outperforms other commonly used products.

Klasmann Plug Mix substrates

Klasmann Plug Mix substrates are developed for the propagation of young plants in tray systems. Selected peat raw materials are processed on state-of-the-art production facilities to ensure that Klasmann Plug Mix substrates are ideally suited to the special requirements of cultivation, growing conditions and climate.

Klasmann easy growing offers a choice of three Klasmann Plug Mix substrates with special properties:
· Klasmann Plug Mix for a good balance between drainage and water-retaining capacity
· Klasmann Plug Mix Extra Plus with a higher amount of structurally stable sod peat for an improved drainage
· Klasmann Plug Mix Aquasave contains moderately decomposed peat to increase the water-retaining capacity

Klasmann Plug Mix substrates are based on structurally stable sod peat with a low proportion of fine matter, which ensures a better air capacity and drainage.

Klasmann Plug Mix Aquasave combines these properties with a good water-retaining capacity, which is achieved by the amount of moderately decomposed peat moss.

Klasmann Plug Mix substrates:
· promote active, fast root development
· ensure healthy, compact young plants
· are suitable for use in all growing conditions

Klasmann Plug Mix substrates are ideal for the propagation of young vegetable plants in modern tray systems. Due to their specially screened structure, they are suitable for use on all filling lines.

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Propagation/ Seedling

· Healthy young plants with direct sowing
· Very fine, free-flowing structure suitable for automatic filling lines

	Potgrond H 70	Traysubstrat	Base Substrate 1 fine	TS 1 fine	TS 3 fine	Plug Mix	Plug Mix Extra Plus	Plug Mix Aquasave
Recipe-No.	047	060	413	876	416	408	402	470
Composition	White peat (0 – 7 mm); Frozen through black peat	White peat (0 – 5 mm); Frozen through black peat	White peat (0 – 5 mm)	White peat (0 – 5 mm)	White peat, moderately decomposed (0 – 5 mm)	White sod peat (1 – 7 mm); White peat, fine	White peat, fine; White sod peat (1 – 7 mm)	White peat, fine; White sod peat (1 – 7 mm); White peat, moderately decomposed (0 – 5 mm)
Clay								
pH-value (H_2O)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Fertilization (g/l)	1.5	1.3	none	1.0	1.0	0.7	0.7	0.7
Extra trace elements		●	●	●	●	●	●	●
Wetting agent		hydro S	hydro S	hydro S	hydro S	hydro S	hydro S	hydro S
Structure	fine	extra fine	extra fine	extra fine	extra fine	fine	fine	fine
Use for	Vegetable and tobacco seedlings	Vegetable and tobacco seedlings	Basis for self-mixing of substrates or in combination with fertilization by the grower	Vegetable young plants, ornamental plants	Vegetable young plants, ornamental plants	Vegetable young plants, seedlings	Vegetable young plants, seedlings	Vegetable young plants, seedlings

Frozen through black peat
Peat fibres
White peat, moderately decomposed
White peat fibres
White peat

TerrAktiv
TerrAktiv FT
Perlite
Coco fibres
GreenFibre

Propagation/ Blocking Substrates

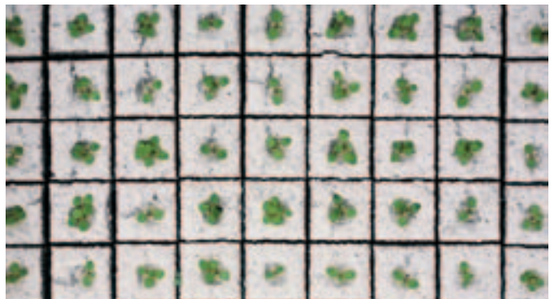
· Stable press pots
· Best results in combination with all blocking lines

Substrate	Potgrond P	Potgrond H 90	Potgrond H 80
Recipe-No.	002	030	051
Composition	Frozen through black peat	White peat (0–7 mm); Frozen through black peat	White peat (0–7 mm); Frozen through black peat
Clay			
pH-value (H_2O)	6.0	6.0	6.0
Fertilization (g/l)	1.5	1.5	1.5
Extra trace elements			
Wetting agent			
Structure	fine	fine	fine
Use for	Vegetable young plants	Vegetable young plants, viola	Vegetable young plants, viola

Ecological plant production

· Optimum substrates for press pots and for growing potted herbs
· Grünstempel® certification pursuant to the EU Regulation on the Organic Production and Labelling of Organic Products

Substrate	KKS Bio Potgrond	KKS Bio Potting Substrate	KKS Bio Herb Substrate
Recipe-No.	025	027	693
Composition	TerrAktiv; TerrAktiv FT; Frozen through black peat	TerrAktiv; White peat (0–25 mm); Frozen through black peat	TerrAktiv; Coco fibres; Frozen through black peat; White sod peat (5–15 mm); White peat (0–25 mm)
Clay			
pH-value (H_2O)	6.0	6.0	6.0
Fertilization (g/l)	organic	organic	organic
Extra trace elements	●	●	●
Wetting agent			
Structure	fine	medium	medium
Use for	Vegetable young plants	Pot herbs, vegetable young plants	Pot herbs, tomato, pepper, cucumber



Nursery stock

· Stable drainage properties
· Suitable for any growing system

Substrate	**Container Substrate 1 medium + GreenFibre**	**Container Substrate 2 coarse**	**Container Substrate 2 medium + clay + GreenFibre**	**Container Substrate 2 coarse + GreenFibre**	**Container Substrate 3 medium + GreenFibre**	**TS 4 PLUS coarse**
Recipe-No.	**559**	**250**	**266**	**272**	**233**	**609**
Composition	White peat (0–25 mm) White sod peat (10–25 mm) GreenFibre Peat fibres Frozen through black peat	White sod peat (25–45 mm) Frozen through black peat Peat fibres	White sod peat (10–25 mm) White peat (10–25 mm) GreenFibre Frozen through black peat	Frozen through black peat White sod peat (25–45 mm) GreenFibre Peat fibres	White sod peat (10–25 mm) GreenFibre Peat fibres White peat (0–25 mm)	White sod peat (25–45 mm) White peat fibres White sod peat (10–25 mm) White peat, moderately decomposed (0–25 mm)
Clay			clay granules			
pH-value (H_2O)	**6.0**	**6.0**	**5.7**	**5.7**	**5.5**	**6.0**
Fertilization (g/l)	**1.0**	**1.5**	**none**	**none**	**0.5**	**1.0**
Extra trace elements	●	●	●	●	●	●
Wetting agent	hydro S					hydro S
Structure	**medium-fibrous**	**coarse-fibrous**	**medium**	**coarse-fibrous**	**medium-fibrous**	**coarse**
Use for	Shrubs	Trees, conifers	Trees, conifers	Trees, conifers	Trees, conifers	Shrubs and trees, foliage plants

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Bedding and patio plants

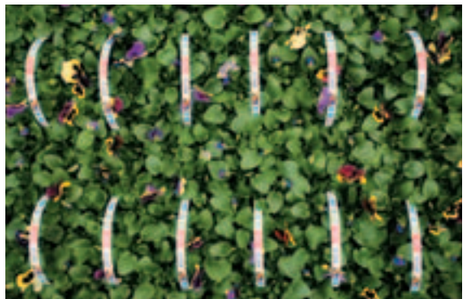
· Successful cultivation in packs and pots
· Also with slow-release fertilizers

	BP-Substrate 1 medium	BP-Substrate 1 medium with clay	BP-Substrate 2 medium	BP Substrate 2 medium + GreenFibre	BP-Substrate 2 medium with clay	BP-Substrate 3 medium with clay	BP-Substrate 4 fine with clay	BP Substrate 4 fine with clay + GreenFibre
Recipe-No.	397	460	274	668	264	265	276	665
Composition	Frozen through black peat Peat fibres White peat (0–25 mm)	Frozen through black peat Peat fibres White peat (0–25 mm)	White peat (0–25 mm) Frozen through black peat	GreenFibre White peat (0–25 mm) Frozen through black peat	White peat (0–25 mm) Frozen through black peat	Frozen through black peat White peat (0–25 mm)	White peat (0–10 mm) Frozen through black peat	GreenFibre White peat (0–10 mm) Frozen through black peat
Clay		●			●	● clay granules	● clay granules	● clay granules
pH-value (H_2O)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Fertilization (g/l)	1.5	1.5	1.5	1,2	1.5	1.5	1.5	1,2
Extra trace elements	hydro S	hydro S	hydro S	hydro S	hydro S	hydro S	hydro S	hydro S
Wetting agent	medium	medium	medium	medium	medium	medium	fine	fine
Structure	medium	medium	medium	medium	medium	medium	fine	fine
Use for	Bedding and patio plants	Geranium, bedding and patio plants	Bedding plants	Bedding plants, geranium and patio plants	Bedding plants, primrose, viola	Bedding and patio plants, primrose, viola	Bedding plants, primrose, viola	Bedding plants

Bedding and patio plants

· Successful cultivation in packs and pots
· Also with slow-release fertilizers

	Substrate 1	Substrate 4	TS 3	TS 3	TS 3	TS 3
Substrate				with clay	medium	medium with clay
Recipe-No.	090	267	425	404	601	607
Composition	White peat (0–10 mm); Frozen through black peat	White peat (0–25 mm); White sod peat (5–15 mm); Frozen through black peat	White peat, moderately decomposed (0–25 mm)	White peat, moderately decomposed (0–25 mm)	White peat fibres; White sod peat (10–25 mm); White peat, moderately decomposed (0–25 mm)	White peat fibres; White sod peat (10–25 mm); White peat, moderately decomposed (0–25 mm)
Clay		●		● clay granules		● clay granules
pH-value (H_2O)	6.0	6.0	6.0	6.0	6.0	6.0
Fertilization (g/l)	1.0	1.5	1.0	1.0	1.0	1.0
Extra trace elements			●	●	●	●
Wetting agent			K hydro S	K hydro S	K hydro S	K hydro S
Structure	fine	medium	medium	medium	medium	medium
Use for	Salt-sensitive ornamental plants, pot herbs	Beeding plants, primrose, viola	Bedding plants	Bedding plants, primrose, viola	Bedding plants	Growing on of geranium, bedding plants



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Pot plants

· Ideal for any irrigation system
· Structurally stable through the use of fractionated sod peat

	Substrate 2	Clay Substrate	Substrate 5	Substrate 5 + GreenFibre	Substrate 5 with Perlite	TS 1 medium	TS 1 coarse	TS 2 medium
Recipe-No.	120	170	590	666	446	085	418	420
Composition	White peat (0–25 mm) White sod peat (5–15 mm) Frozen through black peat	White sod peat (10–25 mm) White peat (0–25 mm) Frozen through black peat	Frozen through black peat White peat (0–25 mm) White sod peat (10–25 mm) Peat fibres	White sod peat (10–25 mm) Frozen through black peat Peat fibres GreenFibre White peat (0–25 mm)	Perlite White peat (0–25 mm) White sod peat (10–25 mm) Peat fibres	White peat (0–25 mm)	White sod peat (10–25 mm) White sod peat (25–45 mm) White peat (0–25 mm) White peat fibres, coarse (70 mm)	White peat (0–25 mm)
Clay		clay granules		clay granules	clay granules			
pH-value (H_2O)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Fertilization (g/l)	2.0	1.5	1.5	1,0	1.5	1.0	1.0	2.0
Extra trace elements			●	●	●	●	●	
Wetting agent				hydro	hydro	hydro	hydro	hydro
Structure	medium	medium	medium	medium	medium	medium	coarse-fibrous	medium
Use for	Geranium, chrysanthemum, fuchsia	Cyclamen, primrose, geranium, perennials	Begonia, cyclamen, poinsettia	Cyclamen, geranium, perennials, bedding plants	Begonia Elatior, cyclamen, poinsettia	Salt-sensitive ornamental plants	Foliage plants, pot plants	Geranium, fuchsia, chrysanthemum

Pot plants

· Ideal for any irrigation system
· Structurally stable through the use of fractionated sod peat

	TS 4 medium	TS 4 medium with clay	TS 4 coarse	TS 4 PLUS medium
Recipe-No.	602	690	604	608
Composition	White peat fibres White peat (0–25 mm) White sod peat (10–25 mm)	White peat fibres White peat (0 – 25 mm) White sod peat (10–25 mm)	White sod peat (10–25 mm) White peat (0 – 25 mm) White sod peat (25 – 45 mm) White peat fibres	White peat fibres White sod peat (10–25 mm) White peat, moderately decomposed (0–25 mm)
Clay		clay granules		
pH-value (H_2O)	6.0	6.0	6.0	6.0
Fertilization (g/l)	1.0	1.0	1.0	1.0
Extra trace elements	●	●	●	●
Wetting agent	K hydro S	K hydro S	K hydro S	K hydro S
Structure	medium	medium	coarse	medium
Use for	Ornamental plants, foliage plants	Foliage plants, cyclamen, pot roses, poinsettia, impatiens new guinea	Ornamental plants, foliage plants	Ornamental plants, foliage plants

	TS 4 PLUS medium + Perlite with clay	Base Substrate 2 medium	Base Substrate 3 coarse-fibrous	Base Substrate 4 coarse	Base Substrate 5 PLUS medium
Recipe-No.	610	422	414	525	600
Composition	Perlite White peat fibres White sod peat (10–25 mm) White peat, moderately decomposed (0–25 mm)	White peat (0–25 mm)	White sod peat (10–25 mm) White sod peat (25–45 mm) White peat (0–25 mm) White peat fibres, coarse (70 mm)	White peat fibres White sod peat (10–25 mm) White sod peat (25–45 mm) White peat (0–25 mm)	White peat fibres White peat, moderately decomposed (0–25 mm)
Clay	clay granules				
pH-value (H_2O)	6.0	6.0	6.0	6.0	6.0
Fertilization (g/l)	1.0	none	none	none	none
Extra trace elements	●	●	●	●	●
Wetting agent	K hydro S	K hydro S	K hydro S	K hydro S	K hydro S
Structure	medium	medium	coarse-fibrous	coarse	medium-fibrous
Use for	Pot plants	Basis for self-mixing of substrates or in combination with fertilization by the grower	Basis for self-mixing of substrates or in combination with fertilization by the grower	Basis for self-mixing of substrates or in combination with fertilization by the grower	Bedding and patio plants

Ericaceous plants

· Ideal for growing-on of heathers and azaleas
· Assured air capacity due to high quality peat raw materials

TS 4 Ericaceous plants

214

4.8

none

●

hydro

medium

Gardenia, camelia, gaultheria, azalea

TS 5 Ericaceous plants

588

4.8

none

●

hydro

medium

Ericaceous plants, camelia, gaultheria, azalea

Lithuanian Peat Moss Special Azerca

933

4.0 – 4.5

none

medium

Ericaceous plants

Soil improvement and production of growing media

· High amount of organic matter
· Monitored safety for substrates mixed by the nursery

Lithuanian Peat Moss fine

930

4.0 – 4.5

none

extra fine

Ericaceous plants, basis for self-mixing of substrates and soil improvement

Lithuanian Peat Moss medium

931

4.0 – 4.5

none

medium

Ericaceous plants, basis for self-mixing of substrates and soil improvement

Lithuanian Peat Moss coarse

932

4.0 – 4.5

none

coarse-fibrous

Ericaceous plants, basis for self-mixing of substrates and soil improvement

Polyhum

901

5.8

1.5

medium

Soil improvement with nutrition effect, high content of organic matter and humic acids, optimal on sandy soils

Substrate
Recipe-No.
Composition
Clay
pH-value (H_2O)
Fertilization (g/l)
Extra trace elements
Wetting agent
Structure
Use for

Constant quality, worry-free growing process

Substrates of the Klasmann easy growing product line cover all important growing processes and methods from sowing through growing-on to organic cultivation.
The constant and high quality of the substrates ensures a healthy, consistent development of the crops. Cultivation methods, as well as potting, pressing and filling lines, have to be adjusted only once to the particular substrate from the Klasmann easy growing product line. The quality of the delivered substrates is always the same – something our customers all over the world have been relying on for decades.

Quality in every detail, proven multiple times
A growing medium is only as good as the sum of its individual parts. After almost a century, Klasmann-Deilmann is extremely well acquainted with the processes involved in extracting and preparing peat raw materials. Only optimum raw materials, additives and combinations of nutrients are used for Klasmann easy growing. The recipes reflect the latest developments in technology and research and are only modified where positive results of research and successful practical trials underline this. Each blend first has to prove itself in a variety of applications under widely differing conditions.
Klasmann-Deilmann is certified to DIN EN ISO 9001:2008. The entire quality chain from raw materials to finished substrates is also subject to the chain control of the R.H.P. (Regeling Handels Potgronden, NL), the most comprehensive and strictest quality control system. KKS Bio Substrates are certified by Grünstempel®, conform to EU Regulation No. 834/2007 and EU Implementing Regulation No. 889/2008 Annex I.

Standardised volumes

The declared filling quantity describes the quantity at time of production and complies with the European Standard EN 12580. This standard defines the method for the determination of volumes of substrate and peat products, either packed or in bulk.

Klasmann products are available

- **in 70 L bags or 200-litre bales**
- **in Big Bales**
- **in bulk**

To find out which delivery forms are available for the respective product, please contact our staff or regional sales partner.

Substrate consumption depending on pot size

Pot size	Substrate volume in l needed for 1,000 pots*	Pots per m³ of substrate*
6 cm ø	130–160	6,900
8 cm ø	230–280	3,920
9 cm ø	330–380	2,820
9 x 9 x 9.5 cm	600–650	1,600
10 cm ø	460–510	2,060
10 x 10 x 11.5 cm	920–970	1,050
11 cm ø	670–720	1,440
12 cm ø	880–930	1,150
13 cm ø	1,100–1,200	870
1.5 l Cont.	1,700–2,000	540
2.0 l Cont.	2,300–2,600	410

* Average data, based on volume according to EN 12580.

Variation depending on substrate humidity, substrate structure, way of potting and plug size of young plants.