

Product sheet	Issue date: 01-10-2016	Green roof substrate
Fields of application		Green Roof



Green Roof substrate

Green Roof substrate is a substrate composed of organic matter, such as peat and compost and minerals. Green Roof substrate is applied on roofs.

The product sheet contains general requirements and product-specific requirements. This product sheet is applicable to green roof substrate with the following application:

- Green roof substrate for intensive greening
- Green roof substrate for extensive greening

This product sheet and all requirements included is applicable from and inclusive the site where the product is produced and/or processed.

Product specific requirements for green roof substrate

General requirements

Green roof substrate must comply with the environmentally hygienic aspects for raw materials and substrates in the applicable country.

Chemical requirements Green Roof substrate

Green Roof		
EC, pH and other analyses		
Measurements	Method	Requirements
EC (mS/m)	EN 13038	≤ 60
pH-KCl	EN 10390	5,0 – 7,5
Calcium carbonate (CaCO ₃)	NEN-ISO 10693	At pH ≤ 6 = CaCO ₃ < 0,5 (weight percent) At pH > 6 = CaCO ₃ < 2 (weight percent)
Cl (mg/l substrate)	EN 13652	≤ 210

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In Green Roof substrate the most important nutrient elements are determined. Each element is assessed and stated, according to the table

Green Roof				
Assessment nutrient elements				
Assessment	Phosphate (P-AI)	Potassium (CAT)	Magnesium (CAT)	Nitrogen N-totaal
Method	EN 1189	EN 13651	EN 13651	EN 13654
	mg / 100g d.s.	mg / liter substrate	mg / liter substrate	mg/kg dry matter
Low	< 30	< 120	< 120	< 80
Good	30 – 60	120 – 300	120 – 360	80 – 160
High	> 60	300 - 475	> 360	> 160

Physical requirements Green Roof substrate

Green Roof		
Physical requirements green roof substrate for intensive greening		
Measurements	Method	Requirements
Bulk density	FLL Dagbegrünung 2008	-
Organic matter	EN 13039	≤ 90 g/l (BD FLL)
Mineral parts Granular < 63 µm	RHP	≤ 20
Mineral parts Granular > 4 mm	RHP	-
Max. water capacity	FLL Dagbegrünung 2008	≥ 45
Pore volume air at maximum water capacity	FLL Dagbegrünung 2008	≥ 10
Hydraulic conductivity Kf- value	FLL Dagbegrünung 2008	≥ 0,3 – 30 mm/min
Stability	EN 16087-1:2011	< 5 mmol O ₂ / kg o.s. per uur
Dry matter content	EN 13040	-
Flow coefficient (roll sensitivity)	-	-
Dust sensitivity	-	-

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Physical requirements green roof substrate for extensive greening

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Measurements	Method	Requirements
Bulk density	FLL Dagbegrünung 2008	-
Organic matter	EN 13039	≤ 65 g/l (BD FLL)
Mineral parts Granular < 63 µm	RHP	≤ 15
Mineral parts Granular > 4 mm	RHP	-
Max. water capacity	FLL Dagbegrünung 2008	≥ 35 - ≤ 65
Pore volume air at maximum water capacity	FLL Dagbegrünung 2008	≥ 10
Hydraulic conductivity Kf-value	FLL Dagbegrünung 2008	≥ 0,6 – 70 mm/min
Stability	EN 16087-1:2011	< 5 mmol O ₂ / kg o.s. per uur
Dry matter content	EN 13040	
Flow coefficient (roll sensitivity)	-	-
Dust sensitivity	-	-

Phytosanitary requirements green roof substrate

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Weeds		
Type of weeds	Method	Requirements
Weeds score	RHP	< 50 per m ²

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Process requirements for green roof substrates

RAG-site

The properties of the site may not lead to affection of the purity and quality of the product.

If land adjacent to a site, or activities on adjacent land, could lead to contamination or mixing of an RAG product, measures must be taken to prevent the risk of this occurring. The layout of an RAG site must be arranged in such a way that mixing of products by tyres, shovels and other means of transport are avoided.

Before a charge is stored, it must be checked if the storage area is clean. If necessary, the area must be cleaned. Products must be stored off the ground. This to prevent the risk of mixing or contamination with diseases from or through the ground.

Weed requirements

The contamination of the substrates with germinative weeds must be avoided. Weeds are not allowed on the RAG production site.

RAG quality mark

Only companies that join RHP are able to supply green roof substrates with the RAG quality mark. RAG approved green roof substrate can be recognized by the RAG-logo which is stated on the invoice and/or delivery receipt. This gives guarantees concerning the quality of the substrate delivered.



Certified for
Green Roof