

ROCKWOOL® GRODAN®

Lightweight high water-retention roof gardens

ROCKWOOL® GRODAN®, which consists of water-absorbent mineral wool slabs, forms the basis of the green roof. The net weight of GRODAN® is low when compared to soil, but it has an excellent water-retention capacity.

Advantages

- Can be used for low, drought-resistant plant species cover the roof surface or attractive gardens with ornamental plants and lawns
- No watering needed once plants are established
- Unique design
- Minimum maintenance
- Can be installed on flat or sloping roof gardens

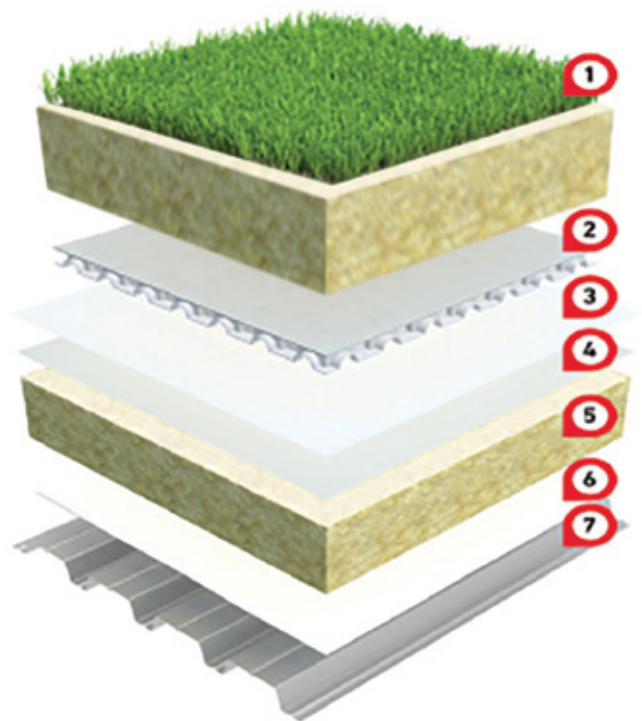
Description

Grodan® is suitable for the following of 3 types roof gardens:-

- Extensive green roofs
- Sloping roofs with plant cover
- Intensive roof gardens

A green roof or roof garden created using GRODAN® weighs very little, and provides optimum conditions for plant growth and rainwater retention.

If the roof has been constructed correctly and suitable drainage installed, there will also be enough air in the growth medium to ensure a sufficient supply of oxygen to the plant roots. The underlying fibre, a thick polypropylene geotextile with high permeability, removes any excess water.



Lightweight roof garden

Floor Details

1. Turf / GRODAN® / Sedum
2. Green roof drainage system
3. Loose filter protection fleece
4. Green roof single ply membrane
5. 100mm to 185mm ROCKWOOL® HARDROCK® 80 Flat Roof Insulation Board
6. Vapour control layer
7. Standard metal deck

GRODAN®, which consists of water-absorbent mineral wool slabs, forms the basic of these green roofs. The net weight of this materials is low, but it has an excellent water-retention capacity (see table below).

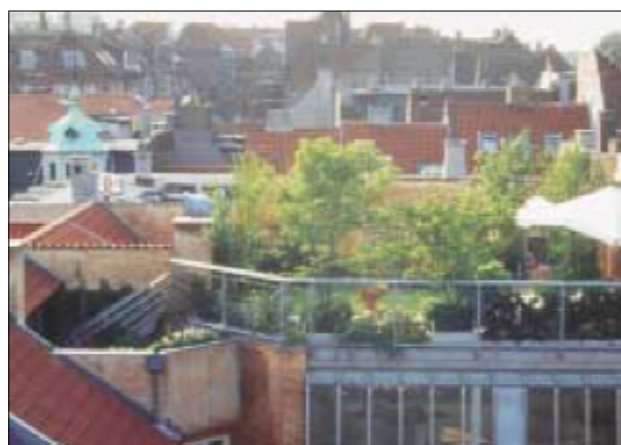
Extensive Green Roof with GRODAN®

	Layer height (mm)	Dry weight (kg/m ²)	Wet weight (kg/m ²)	Maximum water capacity (l/m ²)	Air content at maximum water capacity (Vol. - %)
Substrate, Extensive-Mix GRODAN®, P/P 100/40 slab	50	32	53	21	36
	40	4	41	37	4
	8	1	10	9	13
Total	98	37	104	67	-

Intensive Roof Garden with GRODAN®

	Layer height (mm)	Dry weight (kg/m ²)	Wet weight (kg/m ²)	Maximum water capacity (l/m ²)	Air content at maximum water capacity (Vol. - %)
Substrate, Extensive-Mix GRODAN®, P/P 100/100 slab	100	60	100	40	40
	100	7	94	87	10
	8	1	11	10	10
Total	208	68	205	137	-

The substrate (top layer) consists of lightweight soil mixed with crushed volcanic stone and organic material which decomposes slowly (primarily based on bark). The most important function of this material is to form a buffer for plant nutrients.



Intensive roof garden

Intensive roof gardens, generally employ individual planting systems adapted to suit the environment and purpose in question. Plants (normally perennial ornamental plants and small bushes) are planted out.

A simple irrigation system is installed (e.g. drip hoses), making it possible to provide additional watering. Regular fertiliser and general care and attention are necessary - as in any other similar garden.

On extensive green roofs, the cheapest way of establishing plant cover is to sow a special seed mixture which will grow in the course of a single growing season. Succulents (sedum plants) can also be scattered in the form of small pieces of plants, or (in small areas) planted out individually. For roofs with a pitch of more than 25°, or in areas exposed to strong winds, we recommend using ready-made vegetation mats, which can be placed directly on top of the GRODAN® layer.



Extensive roof garden

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