

GrainDrain® Flexibele Landdrainage – Technical Data-Sheet

Wrappings

The wrappings for drainage-tubes are divided according to the O90-value.

The basics for this systematic is the pore-size per wrapping, indicated with a micron-value.

The O90-value is a measurement for the pore-size and the denomination for the compactness / density of the wrapping-material.

As the material gets compacter, the O90-value gets smaller.

A wrapping with a low O90-value could, in some cases, get constipated more easily then a wrapping with a higher O90-value.

Example – PP450	
PP	Polypropylene as basic-material
450	O90-value 450 micron
Filter-density	The wrapping will stop 90% of all particles larger then 450 micron

Overview wrappings

Artificial-wrappings (PP450/PP700/Vlies) have a longer life expectancy then organic wrappings (Coco). These artificial wrappings are suitable for usage on ironrich-, sand- and peatsoil.

Organic wrappings as Coco are more likely to digest sooner when used in lime-rich soil (as clay-ground) but are suitable for usage on peat- and sand-ground and are often applied in Germany and Eastern-Holland.



PP	Polypropylene as basic-material
450	450 micron
Density	The wrapping will stop 90% of all particles larger then 450 micron
Application	Mostly used / especially on clayground



PP	Polypropylene as basic-material
700	700 micron
Density	The wrapping will stop 90% of all particles larger then 700 micron
Application	Open structure / Sand-, peat- and clayground



Coco	Coco-fibres as basic-material
1000	1000 micron
Density	The wrapping will stop 90% of all particles larger then 1000 micron
Application	German market / Sand- and peatsoil



Coco (heavy)	Coco-fibres as basic-material
700	700 micron
Density	The wrapping will stop 90% of all particles larger then 700 micron
Application	German market / Sand- and peatsoil



Vlies	Polyester-nonwoven cloth as basic-material
180-240	180-240 micron
Density	The wrapping will stop 90% of all particles larger then 180-240 micron
Application	Sand-, peat- and clayground / Germany



Nylon Stocking	Nylon stocking as basic-material
± 200	The wrapping will stop appr. 90% of all particles larger then 200 micron (variable per quality)
Application	Temporary drainage

For certificats: www.grainplastics.nl / Product info

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TECHNICAL DATA GRAINDRAIN®

Water evacuation in litres per minute at a hydraulic slope in cm by 100 meters of :									
DN.	5 cm	8 cm	10 cm	15 cm	20 cm	25 cm	30 cm	40 cm	50 cm
50	9	12	14	17	20	23	26	30	36
60	15	20	23	27	32	36	41	48	55
65	19	25	29	35	42	48	55	63	72
80	36	46	54	65	76	85	100	112	127
100	65	85	98	118	140	160	180	210	240
125	115	153	173	211	258	287	316	380	420
160	220	280	325	385	485	535	600	700	800
200	400	540	600	720	870	950	1090	1300	1500

Dimensions "GrainDrain®" PE Drainagetube

External Diameter (mm)	25	50	60	65	80	100	125	160	200
Internal Diameter (mm)	20	42	50,5	55,5	68,5	85	107,5	140	176
Rows of perforations (pcs.)	4	6	6	6	6	8	8	6	6
Width of perforations (mm)	0,8	1,1	1,1	1,1	1,3	1,5	1,5	1,5	1,8
Length of perforations (mm)	6,0	8,0	10	11	12,0	16	16	20	20
Number of perforations per meter	430	210	405	381	321	308	244	348	330
Perforated surface per m ² (mm ²)	2064	1848	4455	4610	5008	7392	5856	10440	9900
Weight (± gr/m.)	75	160	200	220	325	415	590	900	1440
Pressure- Class	SN8	SN8	SN8	SN8	SN8	SN6	SN4	SN4	SN4
Bending radius (min. mm)	100	100	120	130	160	200	250	320	400

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Material	PE	PP	PVC
Min. Tolerable temperature*	- 18°C	- 25°C	+ 3°C
Max. Tolerable temperature*	+ 110°C	+ 130°C	+ 80°C

* These are theoretical values, when doubt strikes, the materials need to be tested in the actual setting.

Advantages PE- and PP Drainage

- Durable
- Flexible
- High chemical resistance
- Able to resist higher and lower temperatures
- Recycled / recyclable material
- Environment-friendly