



Quality Regulations for Granular Drainage Material

All values relate to the condition in a specified laboratory compaction test.

Quality Parameters	Range of Values	
	Intensive Greening	Extensive Greening
1 Permissible constituents	Organic, mineral and synthetic substances. If there is an RAL quality assurance system for the organic starting substances, quality-assured or equivalent products are to be used. The decision rests with the Quality Committee "Substrates for Green Roofs and Substrates for Tree Planting"	
2 Declaration		
2.1 Constituents	Declaration of constituents > 5 vol. % in descending order. Recycling materials must be considered.	
3 Physical properties		
3.1 Grain size distribution [mass %]		
3.1.1 Proportion of clay and silt ($d \leq 0.063$ mm)	≤ 10	
3.2 Bulk density (volume weight) [g/cm ³]		
3.2.1 dry	To be analysed	
3.2.2 at maximum water capacity (Wk max.)	To be analysed	
3.3 Water and air management		
3.3.1 Maximum water capacity [vol. %]	To be analysed	
3.3.2 Water permeability mod. k_f [mm/min]	≥ 180	
3.4 Selectable foreign matter [mass %]		
3.4.1 $d > 6$ mm; e.g. tiles, glass, ceramics, wood remains	≤ 0.3	
3.4.2 Plastics (loss due to heating > 70% by weight)	≤ 0.1	
3.4.3 Surface sum of plastics (if 3.4.2 is exceeded) [cm ² /l]	≤ 10	
4 Chemical properties		
4.1 pH value	6.0 - 8.5	
4.2 Salinity [g/l]	Water extract: ≤ 2.5 Gypsum extract ≤ 1.5 (when necessary)	Water extract: ≤ 3.5 Gypsum extract ≤ 2.5 (when necessary)
5 Biological properties		
5.1 Growth inhibitors	Germination test produces no evidence of growth inhibitors	
6 Requirements as to environmental relevance	The substrates are to be examined for environmentally relevant substances in the eluate (see table on environmental relevance) (Table 6-7).	
7 Heavy metals	The substrates are to be examined for heavy metals (see table 6-8).	