

Quality Parameters for Quality Assurance

Substrates for Roof-Gardens for Extensive Greening in a mono-layer (RAL-GZ 250/6-4)



Parameter	Range for values
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 technical committee 'substrates for roof-gardens'
2 Declaration	
2.1 Constituents	Declaration of constituents > 5Vol. % in descending order. Recycling materials must be considered
3 Physical properties	
3.1 Granulometric distribution [mass-%]	The granulation curve must lie in the set granular distribution range
3.1.1 proportion of clay and silt ($d \leq 0,063$ mm)	≤ 10
3.1.2 proportion of fine / medium gravel ($d > 4$ mm)	≤ 75
3.2 Apparent 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 Total pore volume [vol.-%]	to be analysed
3.3.2 Maximum water capacity [vol.-%]	$\geq 20 \leq 65$
3.3.3 Air content at WK max [vol.-%]	≥ 10
3.3.4 Water permeability mod. k_f [mm/min]	60 - 400
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 burning > 70% by wt)	≤ 0.1
3.4.3 sum of surface from plastics (when 3.4.2 does not come to the estimate)	≤ 10
4 Chemical properties	
4.1 Organic content [mass-%]	≤ 40
4.2 pH value	6.0 - 8.5
4.3 Salt content [g/l]	water extract: ≤ 2.5 ; gypsum extract ≤ 1.5 (when necessary)
4.4 Soluble nutrients [mg/l]	
4.4.1 Nitrogen ($\text{NO}_3\text{-N} + \text{NH}_4\text{-N}$)	CaCl ₂ : ≤ 80 CAT: ≤ 80
4.4.2 Phosphorous (P_2O_5)	CAL: ≤ 200 CAT: ≤ 50
4.4.3 Potassium (K_2O)	CAL: ≤ 700 CAT: ≤ 500
4.4.4 Magnesium (Mg)	CAL: ≤ 200 CAT: ≤ 200
5 Biological properties	
5.1 Growth inhibitors	Germination test produces no evidence of growth inhibitors; analysed where needed
6 Requirements as to environmental relevance	The substrates are to be examined for environmentally relevant substances in the eluate (see table on environmental relevance).
7 Heavy metals	The substrates are to be examined for heavy metals (see table on heavy metals).