

Inorganic Plant Growth Substrate and Use For Air and Water Filtration

Abstract

The present invention provides an inorganic plant growth substrate (100,100a), which is made up of a rockwool layer (110) sandwiched between two fleece layers (140). The substrate is sewn with spatial rows of stitches (160) to keep the layer structure. The substrate (100,100a) is rolled up to form upright blocks (102) for placement in pots (10), folded to form multilayered blocks (104) for placement in planter (14) or stacked up to form vertical planters (106). The fleece layers (140) give excellent water retention and compensates for hydrophobicity and low cationic exchange capacity of the rockwool layer (110). Air filtered through the plant growth substrate (100, 100a) is used to improve indoor air quality and to reduce air conditioning energy. Water filtered through the plant growth substrate (100, 100a) can be recycled or used for air scrubbing and cooling.

FIGs. 1A and 1B for publication.