TERRASYSTEM®

WET-SORB

PRODUCT GUIDE

WET-SORB

WET-SORB is a new functional water absorbent polymer, it contains lots of hydrophilic groups and excellent molecule structure. It can absorb hundred times water of its own weight in a short time, and release afterwards slowly and absorb repeatedly. Therefore, it can form a miniature reservoir around the plant's root, keep a moist environment and develop water and fertilizer retaining capacity of soil effectively, increase using rate of water and fertiliser, improve the structure and ventilation of soil, create a good growing environment for the plant.

Product Appearance

White granules

Specification

Indicators	Specifications
Appearance	White Granules
Size (mesh)	5-20/20-80/40-100
Free absorbency of distilled water (ml/g)	≥ 500
Water keeping ratio	≥ 350
Apparent density (ml/g)	0.56
Water content	< 6%
PH value	7
Monomer residual	< 500
Potassium	21.60%

The main function of WET-SORB is absorbing, gathering, retaining and releasing the water gradually in order to keep the plants and crops with plentiful water in anywhere even in harsh environments.

Application

WET-SORB is extensively used in farm lands (crops), forestry, gardening, lawn and seed transportation.

Application Equipment

WET-SORB application does not require specific equipment. The machines and devices routinely used during fertiliser application, soil tillage and sawing/planting operations should normally be suitable.

Agriculture and Horticulture

Broadcast dry application with sole WET-SORB or mixed with fertiliser by using a centrifugal mineral fertiliser distributor or an organic fertiliser spreader. Must be incorporated into soil immediately after application.

Spot dry application with sole WET-SORB or mixed with the seed by using a seed drill (sawing machine).

Band dry furrow or side-dress application with sole WET-SORB or mixed with fertiliser or plant protection agent by using a dosing device, side-dress fertiliser applicator or a micro granulator.

Greenhouse

Band furrow dry application in the planting beds with sole WET-SORB or mixed with fertiliser or plant protection agent by using a dosing device or a micro granulator.

Planting bed application of sole WET-SORB to be mixed within the planting media by using a mixing device prior to bed formation.

Ornamentals

Pot dry application of sole WET-SORB uniformly mixed with the growing media prior to sawing or transplanting by using a mixing device.

Wood, fruit and ornamental tree seedling transplanting

Band furrow dry application with sole WET-SORB or mixed with fertiliser by using a dosing device, side-dress fertiliser applicator or a micro granulator.

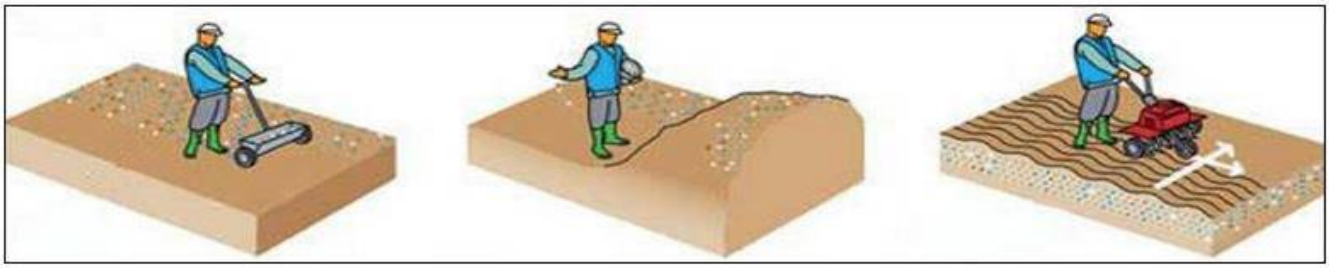
Planting hole dry or pre-hydrated application with sole WET-SORB mixed with the backfill material by hand or by using a mixing device.

Spot dry or pre-hydrated application during seedling transplant with sole WET-SORB using a semi-mechanised planting device.

Turf

Broadcast dry application of sole WET-SORB on the carrying layer of the roll of turf by using a centrifugal mineral fertiliser distributor. Must be incorporated into the layer immediately after application. Extensive irrigation is required after the roll-out of the turf. Injection of dry or pre-hydrated sole WET-SORB in the root zone of established turf using a hand injector or full mechanised tractor mounted or pulled injection machine.

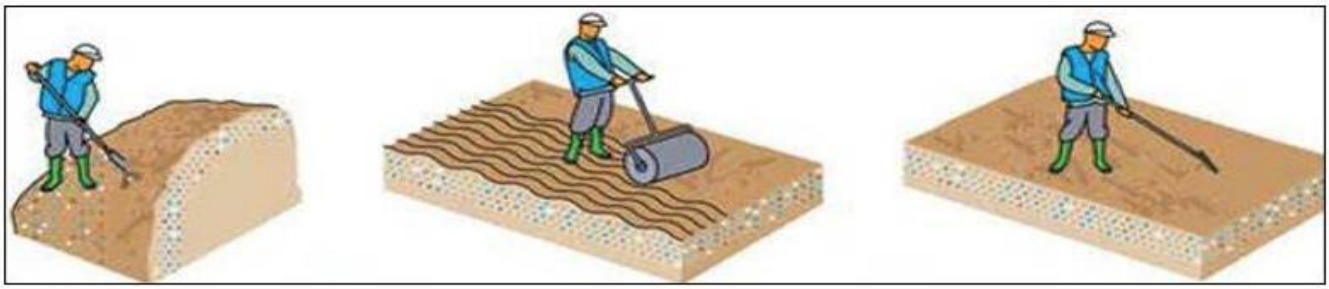
How to use WETSORB?



Mix WETSORB with fertilizer and soil evenly and then apply the mixture to the ground by using fertilizer applicator

For the confined area (less than 50 square meters). It is recommended to apply by hand.

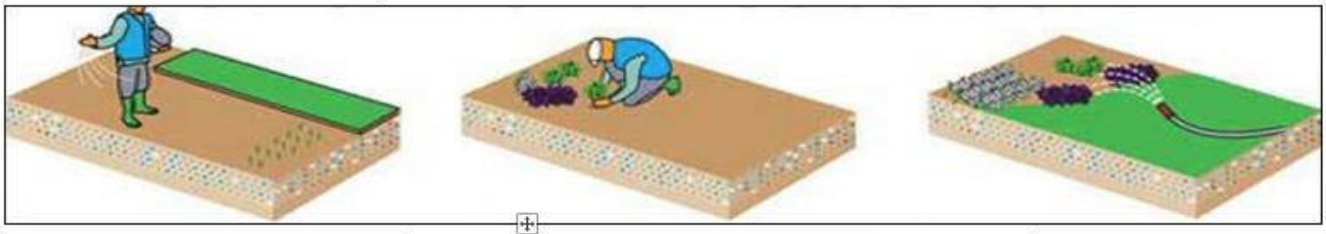
Completely turn over the ground by using tillage machine (require WETSORB at depth of 20 cm)



For the hills and side slope, it requires work done by hand (WETSORB at depth of 20 cm).

Trampling the ground.

Put surface soil in order before plant



Seeding, grass planting or spray-seeding

It also applies to flower-planting, shrub-planting.

Water the ground

Advantages of WET-SORB?

1. Reduce watering frequency by up to 50%
2. Increase soil porosity
3. Reduce hydric stress
4. Reduce leaching and cuts fertiliser usage
5. Environment friendly, against drought and groundwater pollution

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Analysis Report

Chemical Analysis of a Material Sample "WET-SORB®"

A material sample was delivered to MAPAG Gmbh on January 12th, 2010, for chemical analysis and evalution of a possible negative impact on the environment.

Sample description: material sample "WET-SORB®"

Methods and Results

The following analytical procedure was performed:
The sample was extracted with destilled water using a rather high solid-liquid ratio of 548,3 g sample and 2 l water. This was due to the chemical features of the material.
After filtration the extract was analysed for relevant chemical compounds and elements.

The results and analytical methods are listed on the next page.

Evaluation

The results obtained by the choosen analytical procedure and the analysed chemical compounds and elements indicate no significant negative impact on the enviroment.

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Akkreditiert durch das Bundesministerium für Wirtschaft und Arbeit mit Geschäftszahl BMWA-92.714/0238-I/12/2007 vom 27. Mai 2007 und durch das Österreichische Institut für Bautechnik mit Geschäftszahl OIB-130-001/99-027 vom 14. Mai 2004.

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17/2010, page 2

Analytical methods and results:

element / chemical compound	methode	units	results
pH-value	DIN 38404, Teil 5	---	8,5
electr. conductivity	ÖNORM EN 27888	mS/m	3,2
ammonium (as N)	DIN 38406, Teil 5	mg/l	< 0,08
nitrite (as N)	ÖNORM EN 26777	mg/l	< 0,003
antimony	ÖNORM EN ISO 11885	mg/l	< 0,01
arsenic	ÖNORM EN ISO 11885	mg/l	< 0,01
lead	ÖNORM EN ISO 11885	mg/l	< 0,01
cadmium	ÖNORM EN ISO 11885	mg/l	< 0,001
chromium	ÖNORM EN ISO 11885	mg/l	< 0,01
cobalt	ÖNORM EN ISO 11885	mg/l	< 0,01
copper	ÖNORM EN ISO 11885	mg/l	0,061
molybdenum	ÖNORM EN ISO 11885	mg/l	< 0,01
nickel	ÖNORM EN ISO 11885	mg/l	< 0,01
mercury	ÖNORM EN 1483	mg/l	< 0,0002
selenium	ÖNORM EN ISO 11885	mg/l	< 0,01
zinc	ÖNORM EN ISO 11885	mg/l	< 0,02
tin	ÖNORM EN ISO 11885	mg/l	0,010
anionic surfactants	DIN 38409, Teil 23	mg/l	< 0,005
phenol index	DIN 38409, Teil 16	mg/l	< 0,01
aliphatic hydrocarbons	DIN 38409, Teil 18	mg/l	< 0,1
TOC (as C)	ÖNORM EN 1484	mg/l	5,93
chemical oxygen demand (COD)	DIN 38409, Teil 41	mg/l	29
chloride	ÖNORM EN ISO 10304-1	mg/l	< 1
nitrate (as NO_3)	ÖNORM EN ISO 10304	mg/l	< 1
sulfate	ÖNORM EN ISO 10304	mg/l	< 1
fluoride	ÖNORM EN ISO 10304	mg/l	< 1

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No. of pages: 2

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