



TURFTECH  
INTERNATIONAL

**FIBA-ZORB™**

# Granular

**The superb substrate wetting agent in granular form**

FIBA-ZORB Granular is the well proven substrate wetting agent in a granular form. This enables growers and producers to incorporate FIBA-ZORB into their substrates without the requirement to use dilution and spraying equipment. It can be added at a suitable stage in the production process when tumbling to ensure even distribution.

The FIBA-ZORB is absorbed onto the very fine vermiculate carrier at a high percentage by weight ratio and as FIBA-ZORB has a greater affinity for moisture, the wetting agent immediately starts to leave the vermiculite carrier when in contact with moist peat fibres, attaching itself to their surface. Only a few days after mixing, the peat substrate displays features of fast initial wetting and the other benefits of the FIBA-ZORB wetting agent.

#### **The Vermiculite Carrier**

Golden brown in colour, the fine particle size of the vermiculite ensures accurate and even distribution of the wetting agent. There are approximately 1.8 million particles in 1 litre of vermiculite. Therefore at a usage rate of 250 g/m<sup>3</sup> of substrate there are 36,000 particles in an 80 litre bag of substrate, or 450 particles per litre of substrate.



# FIBA-ZORB™ Granular



## Special Features of the FIBA-ZORB Molecule

The FIBA-ZORB molecule is non-ionic and has a neutral structure which ensures that it does not form any complex chemistry with the vermiculite carrier and is more attracted to the moist peat substrate. As the molecule is a special balance of hydrophilic (water loving)

and hydrophobic (water hating) properties it is readily attracted to the moist surfaces of the peat and allows water to pass into the peat when irrigated.

## Water Mobility

Following the treatment of the peat with FIBA-ZORB Granular the peat substrate will absorb the applied irrigation water uniformly whether it is in seedling plugs or larger growing pots. This even absorption of applied water ensures that the root structure will receive the correct volume of water and therefore benefit from all the applied nutrients in the peat substrate. Finally, plants can suffer from a fungal attack caused by water stress and conversely root-rot can be a problem in poorly drained substrates. Both of these symptoms are alleviated when FIBA-ZORB Granular is incorporated into the peat substrates.

## Air Filled Porosity

The AFP of the peat substrate will not be effected by the addition of the FIBA-ZORB Granular wetting agent.

## Rapid Wetting and Re-wetting

After crop safety, the speed of wetting and re-wetting are the most beneficial and important factors for incorporating the FIBA-ZORB Granular wetting agent.

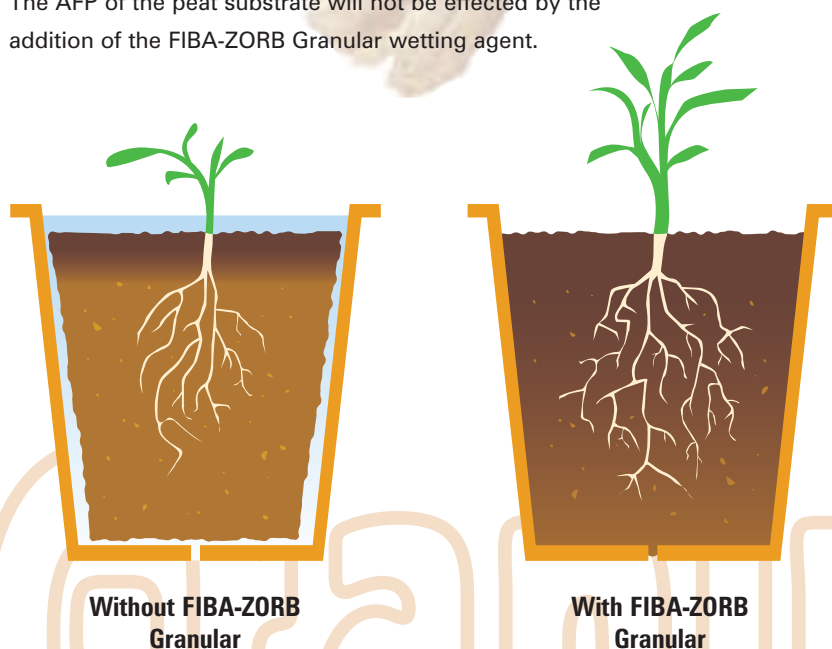
When substrates with FIBA-ZORB Granular are transported to the warmer growing regions the transit time will ensure that the substrate will absorb the wetting agent out of the vermiculite carrier and ensure rapid initial wetting at the destination when the substrate is brought into use.

## Slows Down the Drying-out Process

An outstanding feature of FIBA-ZORB Granular is its ability to slowdown the drying-out process of the peat substrates. The maximum volume of water absorbed ensures that the drying-out process is extended in comparison to untreated substrates and therefore the intervals between watering can be extended significantly.

## Period of Action

Like the FIBA-ZORB liquid, the granular version will ensure 12 months longevity of the wetting agent benefits to the grower.



## Benefits observed after only two irrigation cycles:

- Alleviates water tension
- No water pooling on top of peat substrate
- Rapid wetting and re-wetting by surface and capillary irrigation
- Uniform water penetration
- Alleviates dry areas
- No water channelling down inside of pots
- Reduces water requirements
- Maximises plant and root growth development
- Slows down drying out process
- Alleviates shrinkage
- Suitable for all growing media
- Better distribution of water soluble chemicals and fertilisers into the root-zone

## PLUS the special benefits of FIBA-ZORB Granular:

- Easy application during the tumbling process of manufacture
- Process does not add further water to already moist peat
- Can be added at any temperature – no viscosity problems
- Safe to handle

# FIBA-ZORB™ Granular

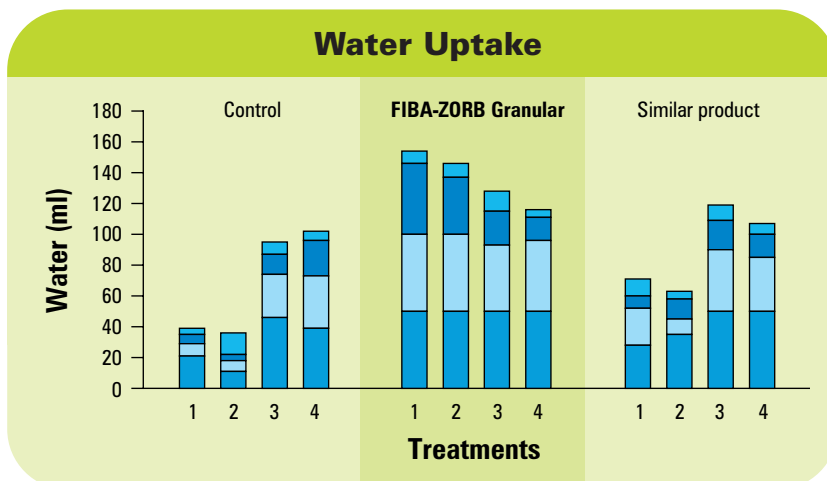
## Independent Comparative Trial Work

Independent trials carried out by Levington Agriculture Limited to compare FIBA-ZORB Granular with a similar granular wetting agent product conclude that FIBA-ZORB Granular is vastly superior in all three important requirements tested.

**Initial Speed of Wetting Tests** proved the addition of FIBA-ZORB Granular to the substrate dramatically improved the INITIAL speed of wetting making the substrate 12 times faster than untreated peat and 9 times faster than the similar product after only 2 weeks of mixing the substrate.

Initial Speed of Wetting			
	Rates	Initial	+ 2 weeks
Control	–	> 3 hrs	> 2 hrs
<b>FIBA-ZORB Granular</b>	<b>250 g/m<sup>3</sup></b>	<b>1.25 hrs</b>	<b>10 mins</b>
Similar granular product	250 g/m <sup>3</sup>	> 3 hrs	1.5 hrs

The peat was mixed with the granular wetting agents at a rate of 250 g/m<sup>3</sup>. 1 litre samples of the mixtures were then brought to 65% moisture content and after resting were compared and timed to calculate the initial wetting speed.

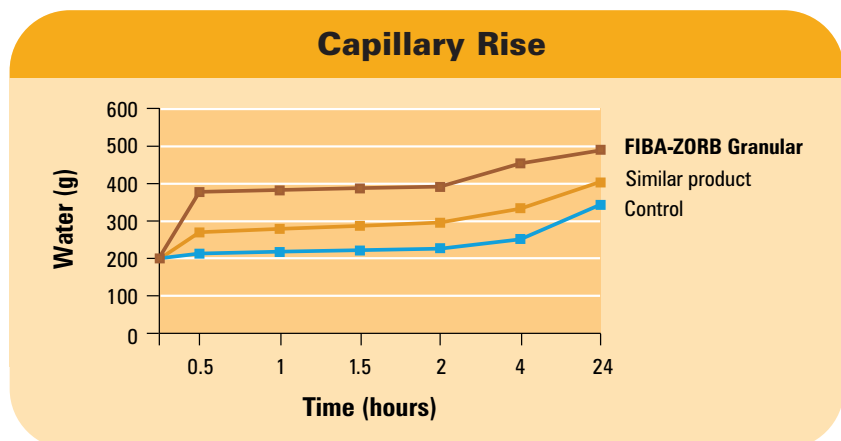


**Water Uptake Tests** proved that FIBA-ZORB Granular enabled the peat to absorb 50% more water than the similar product. After the peat samples had rested for two weeks and dried back to 50–55% moisture content they were tested to measure the volume of water absorbed by adding 4 x 50 mls of water to the surface and weighing after each 50 mls was added, once the surplus water had finished draining away.

**Water Uptake** is the substrate's ability to absorb applied irrigation water during a controlled watering regime

**Capillary Rise Tests** showed that after just 30 minutes the 200 g sample of substrate treated with FIBA-ZORB Granular had absorbed 176 mls of water compared to the untreated substrate which only absorbed 13 mls of water and the similar product only 70 mls of water.

**Capillary Rise Tests** measure the amount of water absorbed vertically when the substrate is placed in a tray of water



From the independent comparative testing programme it can be concluded that FIBA-ZORB Granular is superior to the similar granular product and that FIBA-ZORB in granular form displays all the features of FIBA-ZORB liquid (see Tech Spec Leaflet F-Z 1.1) with the benefits of easy application as an added bonus.

# FIBA-ZORB™ Granular

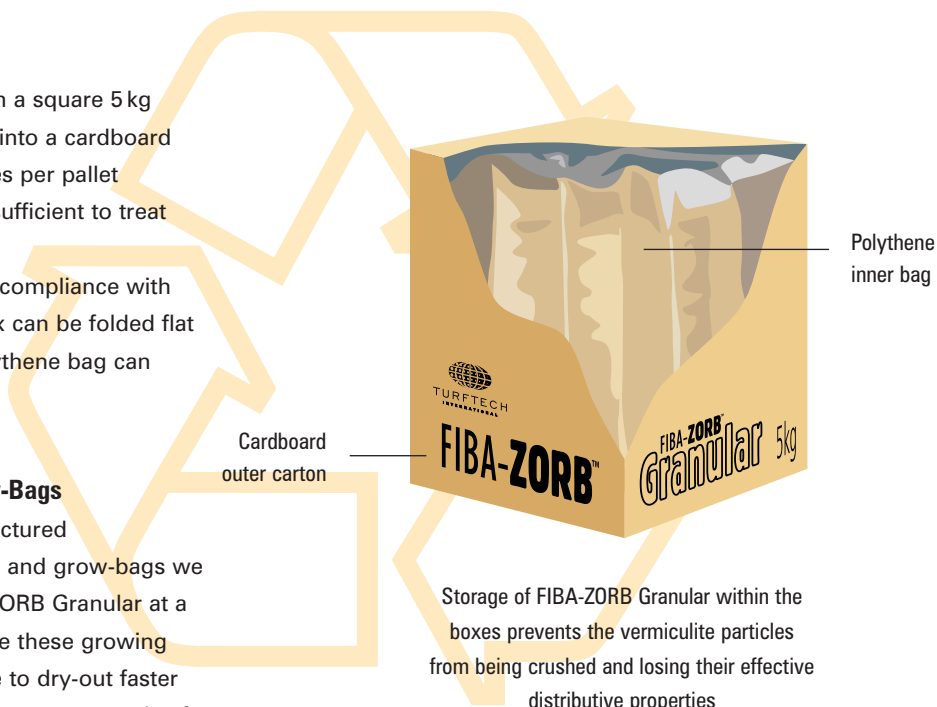
## Recyclable Packaging

FIBA-ZORB Granular is supplied in a square 5 kg resealable polythene bag packed into a cardboard carton. These are packed 60 boxes per pallet (5 layers of 12 boxes) i.e. 300 kg sufficient to treat 1200 m<sup>3</sup> of substrate at 250 g/m<sup>3</sup>.

This packaging enables easy compliance with EC packaging regulations, the box can be folded flat and recycled whilst the inner polythene bag can be compacted and recycled.

## Pots, Hanging Baskets and Grow-Bags

When peat substrates are manufactured specifically for pots, baskets, tubs and grow-bags we recommend incorporating FIBA-ZORB Granular at a higher rate (see table below) because these growing methods cause the peat substrate to dry-out faster than normal, consequently water management is of prime importance in order to ensure healthy plant development and maximum yield.



## Recommendations for Use

	Volume of substrate	Weight of FIBA-ZORB Granular
Peat Substrate Use	1 cubic metre	250 grams
Multi-purpose Use	1 cubic metre	250 grams
Seedlings and Bedding Plants	1 cubic metre	250 grams
Pots, Hanging Baskets, and Grow Bags	1 cubic metre	350 grams

## Proven Record

FIBA-ZORB has been used commercially for many years and clearly demonstrates improved yields and more rapid germination within a wide range of plant species. The major benefit which these factors offer the commercial grower are highly significant.



**TURFTECH**  
INTERNATIONAL

**Turftech International Limited**

5 Cable Court, Pittman Way, Fulwood, Preston, Lancashire PR2 9YW, England

Tel +44 (0) 1772 704433 Fax +44 (0) 1772 704477

E-mail [turftech-turftech@btinternet.com](mailto:turftech-turftech@btinternet.com)

Web [www.turftech.co.uk](http://www.turftech.co.uk)