

## “Lighter in weight for healthier plant growth”

**DiateGrow Aggregates** are a premium soil amendment designed to reduce water usage, improve drainage, increase plant available water and reduce soil compaction. When used on the surface DiateGrow will reduce water loss, prevent dust and surface drying, plus protect desired plants from weed growth and improve aesthetics.

### What are DiateGrow Aggregates composed of?

DiateGrow is based on diatomite, also known as diatomaceous earth - a biochemical sedimentary material composed mainly of the skeletons of marine plankton - diatoms. These microscopic single cell algae died and accumulated as sedimentary layers on the bottom of lakes over millions of years. Their skeletons are composed of silica. Since diatom skeletons are highly porous, diatomite is extremely light in weight. Diatomite is used for multiple uses and is commonly used as a horticultural and agronomic aid.

### Characteristics of DiateGrow are:

- 1. High available Silica Content** - will slowly release silica to your plants. DiateGrow is not a fertilizer but provides plant available silica which enhances the uptake of water soluble fertilizers. The silica strengthens the plants' cuticular cell wall, and imparts a stronger physical resistance to disease and stimulates the plants' "immune system." Active silica can also stimulate the development of plant growth promoting rhizobacteria.
- 2. Water holding capacity** - will absorb up to 140% of its own weight in fluids and slowly release the fluids as required by the plant.
- 3. Capillary Action and lateral movement** - allows the vertical and lateral movement of water and nutrients within the soil or potting medium..
- 4. Is pH stable.**
- 5. Assists Aeration** - is excellent owing to the fact that the granules are multi-faceted and do not compact. DiateGrow increases soil porosity which assists drainage, water absorption and oxygen availability to roots. Improvements in soil physical properties promote larger, healthier root systems that are more effective at acquiring water and nutrients.
- 6. Insulation Qualities** - The microscopic porous structure of each granule provides effective thermal insulation to plants and root zones.
- 7. Light in weight** - good for terrace gardening and potting medium where weight is an important consideration
- 8. Sterile** - is sterilized when Heat-treated to aid plant establishment.
- 9. Longevity** "Diatomite" diatoms are fossilized exoskeletons and are millions of years old. It will not break down.
- 10. DiateGrow has a relatively high cation exchange capacity (CEC)** and can decrease leaching losses of fertilisers from the root zone. Nutrients are also held within a biofilm that develops on and inside the porous diatom shell.



Seedling root structure grown in potting soil with 22 percent perlite.  
Right: Seedling root structure grown in potting soil with 22 percent diatomite aggregate.

## USES OF DIATEGROW

### Use it in pots and containers to increase porosity

Diatomite is often used as a medium for growing plants, usually in conjunction with other substances. That, as well as the porosity, makes it a good growing medium for hydroponic containers and Bonsai culture. Mix it with potting soil to increase drainage and air circulation in the root zone

Without Diategrow



With Diategrow

### Amend your soil.

Work Diategrow into garden beds and potting mixes to improve water and nutrient retention. Use 15 to 20 percent by volume in indoor potting mixes and 10 to 15 percent by volume in garden beds and outdoor containers.

### Horticulture and plants in greenhouses

- Improves soil structure and drainage
- Reduces watering cycle
- Reduces soil weight of containers
- Efficient development of the plant

### Intensive and extensive roof top gardens, vertical gardens and landscaping

- Ideal for shallow soil medium (eg flat roof tops)
- Lightweight – reduces weight
- Water retention
- Improves plant growth and health

### New lawn construction and sporting fields

Soils that consist of high clay contents may suffer from poor soil structure and aeration. Diategrow helps to improve soil porosity and facilitates deep penetration of roots enabling faster development of turf and more resistance to wear and water defi-

## Benefits

- Increases water use efficiency
- Improves drainage
- Reduces soil compaction
- pH stable
- Provides open structure for air flow
- Natural freshwater origin and beneficial to the environment
- Stimulates the growth of beneficial soil biology
- Good thermal insulation
- Long lasting
- Light weight (< 350 kg/cbm) (compare with small stone as cover at >1000 kg/cbm)
- approx 3 time lighter
- Easier to carry
- Less weight in pots, on infrastructure
- Microporous structure – provides proper amount of oxygenation for growth of roots
- Reusable

## Ideal for:

- Pot plants
- Golf courses and lawn
- Landscaping and Terrace gardens
- Sports turfs eg football fields



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