

Vulkaponic is used for semi-hydroculture, a modified soil and hydroculture planting technique. The mineral substrate is a mixture of pumice and high-quality zeolite granules well suited for tropicals, palms, cacti, succulents, and orchids.

This relatively lightweight substrate has an outstanding water storage capacity, over 30% by volume. It provides optimal air pore volume of more than 35% by volume. It also has a high nutrient storage capacity.

The substrate absorbs all the water during the watering, and no water remains in the pot. The roots slowly absorb the moisture from the substrate. This ensures a good moisture balance and exceptional root aeration, which benefits plant health and growth.



## BENEFITS OF VULKAPONIC®

### PLANTS GROW BETTER IN VULKAPONIC

It supplies steady moisture and oxygen to plant roots and has a consistent moisture-holding capacity compared to soil from different growers. The result—better plant quality.

### FEWER WATERING VISITS

With the substrate's high water storage capacity, fewer watering visits are required. This allows for extended horticultural service cycles of up to four weeks. The plant takes up water at its own rate.

### REDUCED RISK OF ROOT ROT

Eliminating soil-born organic microbes reduces the risk of root rot. When overwatered, Vulkaponic doesn't become waterlogged like soil. It provides more aeration, which aids healthy root growth.

### REDUCTION IN FUNGUS GNATS

One main reason for converting to semi-hydro is to reduce fungus gnats. The substrate's dry and inert surface breaks the life cycle of fungus gnat larvae.

### IT IS REUSABLE

A considerable benefit of soilless potting substrates is that they can be reused for extended periods. When washed and rinsed, Vulkaponic can be reused.

### IT IS ATTRACTIVE

As the stones are attractive, Vulkaponic can eliminate the need for additional decorative top dressing. However, if desired, these can easily be placed on top of the Vulkaponic to change the aesthetics of the display.

## 1. WHAT IS THE GRANULE SIZE OF VULKAPONIC?

Vulkaponic is available in fine (2-5 mm) and coarse (3-8 mm) granules. We use Vulkaponic coarse, which allows for greater root aeration.

## 2. ARE YOU DIRECT PLANTING WITH THE SOIL INTACT FROM THE ORIGINAL ROOT SYSTEM OR REMOVING SOIL FIRST?

We remove the grow pot and direct plant. Depending on the type and size of the plant, we'll occasionally remove some soil, but we mostly leave all the soil on.

## 3. HOW MUCH VULKAPONIC DO YOU PUT UNDERNEATH THE ROOT BALL?

Depending on the plant and container, it should be at least 2" to 3" for small plants and about 4" to 8" for larger plants. It depends on the height of the liner/bottom compared to the root ball.

## 4. HOW FAR WILL WATER TRAVEL UPWARD TO THE ROOT SYSTEM?

Due to capillary action, water will be drawn upwards over 10" to 12" through Vulkaponic. We have many trees in Vulkaponic with the underplanting of trailing plants. You need to water in each plant initially to create the capillary action but after that, other than occasional spot watering, the water is drawn from this substrate as the plant requires it.

## 5. WITH TALL DECORATIVE CONTAINERS, ARE YOU CREATING A FALSE BOTTOM?

All tall containers have a false bottom and utilize a plant liner to lift the vulkaponic and plant.

## 6. I UNDERSTAND WATER INDICATORS ARE OPTIONAL. WHEN WOULD YOU USE AN INDICATOR AND WHAT TYPE?

Water indicators are not required. They don't tell you when to water; they help ensure you don't overwater. We may use them in planters to ensure no standing water is at the bottom. They are from a European distributor—both small pen types and larger XL types in various lengths. We cut them down to size if they stick up with a PVC cutter or mini hacksaw.

## 7. DO YOU SEPARATE THE VULKAPONIC FROM THE ROOT BALL WITH A CAPILLARY MAT?

No, you don't need to separate; it's just one full Vulkaponic planter.



# VULKAPONIC® PLANTING

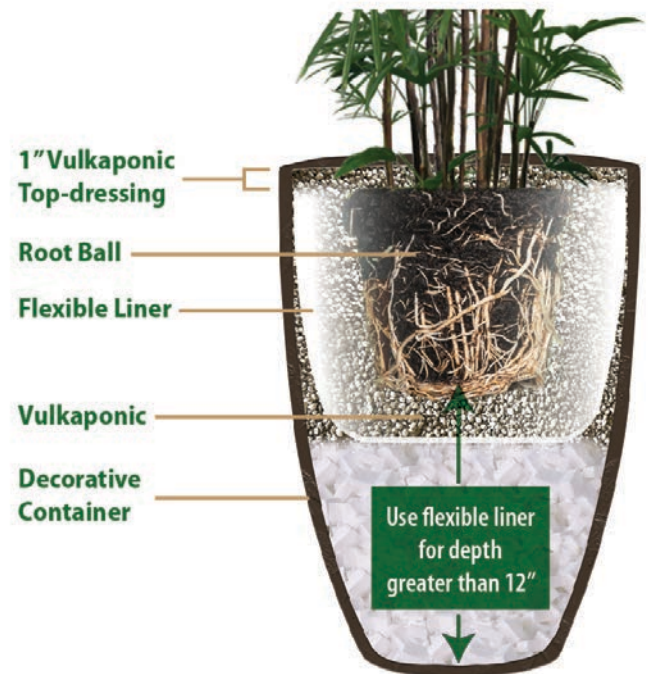
Vulkaponic planting is performed directly in a waterproof decorative container or flexible liner. The substrate can transport water up to a height of 12". Therefore, if the layer of Vulkaponic under the root ball is deeper than 12", a false bottom and flexible liner will be necessary.

With a false bottom, fill the space under the plant liner with fill material such as Styrofoam board or chips. Place the plant liner on the fill material so that the top edge of the liner is just below the top rim of the container.

## VULKAPONIC® PLANTING GUIDE

### STEP 1. CONTAINER PREPARATION

1. Use a decorative container with an inside diameter at least 20% larger than the grow pot – for example, with a 10" grow pot, use a 12" container or larger.
2. The container is the water reservoir. It must be waterproof. If not, waterproof with RedGard® waterproofing membrane (Home Depot). RedGard® is applied like paint with a small piece of foam or brush. When dry, it turns from pink to red. Drying time is 1-1½ hrs. Apply a second coat. Once dry, the container is ready for planting.
3. A flexible liner is the water reservoir in tall containers. A false bottom is built with Styrofoam. The liner's top edge should be just under the container's top rim.
4. Rectangles are built up as a single reservoir using 8 mil polyethylene as waterproofing.



### STEP 2. PLANTING

1. Add up to a 12" layer of Vulkaponic to the bottom of the container or liner. The Vulkaponic layer must be high enough to ensure that when the root ball is placed, the top of the root ball is 1½" below the rim of the container.
2. Remove the grow pot and place the root ball directly on the Vulkaponic in the center of the container. Assure the root ball is 1½" below the rim of the container. Adjust the height as needed.
3. Fill the container with Vulkaponic. Add 1" of Vulkaponic on top of the root ball as a top dressing. The finished Vulkaponic level should now be ½" below the container's rim.
4. At the job site, top water the root ball of each plant initially while filling the reservoir to create the capillary action.



# PLANTING SUPPLIES NEEDED



- Waterproof Decorative Planter
- Vulkaponic
- Metal scoop
- RedGard® waterproofing membrane
- Foam applicator
- 8 mil plastic sheeting (for rectangular containers)
- Flexible liners (for tall containers)

## VULKAPONIC® WATERING



Watering cycles in Vulkaponic are usually on a 4-week interval depending on location since the substrate absorbs a tremendous amount of water (30% by volume) and releases it to the plant over several weeks.

Plants in Vulkaponic don't use less water. However, the substrate absorbs enough water for the plant's requirements over several weeks, allowing for an extended watering cycle. With each cycle, you will provide enough water to maintain the plant for up to four weeks.

As with all interior plantings, the plant's water needs depend on the variety, pot size, heat, and light levels of the specific location. A soil probe is used to determine moisture. Brush away the top layer of Vulkaponic from the root ball to probe for moisture. The chart below may be a helpful guideline for determining how much water to cover a **4-week watering cycle**.

During initial watering, top water the root ball while filling the reservoir to create capillary action. For subsequent watering, evenly water between the root ball and decorative container. The objective is to fill the reservoir, not saturate the root ball.

PLANT SIZE	LOW LIGHT	HIGH LIGHT
8" PLANT IN 10-12" CONTAINER	< ¼ GAL.	¼ GAL.
10" PLANT IN 12-14" CONTAINER	¼ - ½ GAL.	½ - ¾ GAL.
14" PLANT IN 16-18" CONTAINER	¾ - 1 GAL.	1 - 1 ¼ GAL.
17" PLANT IN 20-22" CONTAINER	1 ¼ - 1 ½ GAL.	1 ½ - 2 GAL.

PRIMESCAPE WATER BUCKET = 10 LITERS = 2 ½ GAL.



# WATER LEVEL INDICATORS



Vulkaponic may be used with a water level indicator, although not required. It's important to know that the water meter doesn't tell you when to water; it helps ensure you don't overwater. Pour water slowly. When the water meter rises to the MAX value, stop watering.

Within 24-48 hours of watering, the water meter will return to minimum. This is normal as the Vulkaponic has absorbed all the water. Don't add extra water when you see this! The Vulkaponic absorbs sufficient water to release to the plant over the upcoming weeks.



# FERTILIZER



Fertilize a plant in Vulkaponic in the same way as a plant in soil. It is best to use liquid fertilizer. You can find the right amount on the packaging of the fertilizer. When in doubt, fertilize a little less rather than more. Too much fertilizer can damage the plant or cause excessive growth.

Indoor plants grow slowly and, therefore, need less fertilizer. Half or a quarter of the recommended label rate is sufficient for most interiors. The further a plant is from the window, the slower it will grow. If a plant grows slowly, it needs little fertilizer.



# ON-LINE RESOURCES

[The best substrate for your plant | Nieuwkoop Europe](#)

[www.123zimmerpflanzen.de](http://www.123zimmerpflanzen.de)

[www.youtube.com Vulkaponic GrowDesign](https://www.youtube.com/VulkaponicGrowDesign)

[Peat-Free Plants | Journal | Plant Designs](#)

[www.vulkaponicusa.com](http://www.vulkaponicusa.com)

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