



## PERLITE

Perlite is a natural volcanic rock. Through a controlled production process at very high temperatures, the final product is manufactured. Perlite comes in various fractions and has been used for decades as a pure substrate or as a raw material to enhance physical properties.



### What is perlite?

Perlite originates as a glassy volcanic rock. It is crushed, sieved and then expanded at approximately 850-900°C. The rock expands due to the evaporation of mineral water bound within the stone. This expansion can increase the stone's volume up to 20 times its original size.

### Origin

The rock perlite, also known as perlite ore, is extracted from quarries and is found in many parts of the world, including Greece.

### Properties

Perlite is a clean product and comes in various fractions, from fine to coarse. The fractions vary by manufacturer. The coarsest fractions have particles up to 8 mm. Some of the pores formed during the heating process are closed. Furthermore, perlite has the following properties:



### Chemical

Nutrient level	very low
Unwanted salts	very low
pH-H <sub>2</sub> O	5.0-8.0
pH-buffering capacity	none
Nitrogen immobilization	none
Pesticide residues	none

### Physical

Air content (-%v)	30-70
Water uptake characteristic (WOK)	fast
Water retention capacity	low-moderate
Stability	high

### Biological

Susceptibility to sapro-trophic fungi	none
Human pathogens	none

### Purpose of use

To increase air content and accelerate water uptake.

## Application

Perlite is used as a substrate raw material in organic substrates. It can also be used as a pure substrate. The specific fraction used depends on the application. The most common fractions are medium-coarse and coarse.

The use of perlite as a pure substrate is commonly seen in the cultures of for example cucumbers, tomatoes, and roses. This application can take place in grow bags (bales) and pots. For the use of perlite in organic substrates, different fractions can be chosen depending on the desired effect. Coarse perlite is often used as a raw material to increase air content. This is especially common in flooded benches culture systems. Contents of about 10-25% (volume fraction) are often used. Medium-coarse and sometimes fine perlite are used, for example, in growing media for young plants, in growing media for seeds and seedlings, as well as for seed covering.

## Distinctive RHP quality

The RHP inspection of perlite begins with the heating process and includes all processing stages as well as the final product. During the production of perlite, plant-harmful substances like fluoride can occasionally be formed. This is a specific focus of RHP monitoring. RHP-certified perlite is subject to strict physical requirements, particularly regarding the product's effect on air and water uptake (WOK).

