

## HORTICULTURAL PERLITE - THE NATURAL GROWING MEDIA FOR OUTDOOR GARDENING

Just as horticultural perlite has served the professional grower for many years, it can help the home gardener solve a multitude of common problems. In addition to promoting drainage and aeration in heavy soils, horticultural perlite provides optimum moisture retention for successful plant growth.

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When horticultural perlite is added to heavy clay soils, water ponding and surface crusting may be eliminated. In addition, plant roots may more easily penetrate the perlite/soil growing media and develop more fully. Horticultural perlite can be particularly advantageous in modifying the structure of general garden soil, patio plantings and roofscapes.

#### What is Perlite?

Perlite is a unique volcanic mineral which expands to about 13 times its original volume when it is heated to a temperature of approximately 1600 deg.F (871 deg.C). During the heating process, the mineral particles pop like popcorn and form a granular, snow-white material that is so light in weight it weighs only about 5 to 8 pounds per cubic foot (80-128 kg/cu.meter).

Each particle of perlite is comprised of tiny closed air cells or bubbles. The surface of each particle is covered with tiny cavities which provide an extremely large surface area. These surface cavities trap moisture and make it available to plant roots. In addition, because of the physical shape of each particle of perlite, air passages are formed in the growing media thereby providing excellent aeration. Fertilizer appropriate to the plants being grown should be added. Horticultural perlite is available in several different grades. The coarse sand size is ideal for general gardening applications.

#### Advantages of Horticultural Perlite

- Improves Aeration and drainage.
- Makes moisture and nutrients readily available to plants.
- Is organic and does not deteriorate.
- Has essentially neutral pH of 6.5 to 7.5.
- Serves as an insulator to reduce extreme soil temperature fluctuations.
- Is sterile and free of weeds and disease.
- Is clean, odorless, lightweight, and safe to handle.

#### General Garden Applications

Soil in vegetable and flower gardens can be conditioned by cultivating, with a fork or roto-tiller, to a depth of 6-12 inches (150-300 mm). A 4 inch (100mm) layer of a mixture of 1/2 horticultural perlite and 1/2 peat moss is worked into the cultivated soil. If the soil is rich in organic material, the peat moss may be eliminated. The same procedure may be followed in preparing lawn areas for sodding or seeding. Established lawns may also be renovated with horticultural perlite. The lawn area should be spiked or plugged and horticultural perlite spread on the surface and raked into the spike or plug holes. The perlite will work its way into the root zone to provide aeration and drainage.

If the garden area is very large, the home gardener may condition only the rows or areas where planting is to take place. Thus, if the procedure is continued for 2-3 years, the entire garden area will eventually be

conditioned. Because horticultural perlite is inorganic, it will not deteriorate in the soil but will continue to function for many years.

When shrubs or trees are to be planted, a planting pocket 6 inches (150 mm) larger than the plant roots should be dug. A mixture of 1/3 soil, 1/3 horticultural perlite, and 1/3 peat moss or compost may be used to fill the hole and complete the planting operation. The shrub or tree should be thoroughly watered. The roots of the plant can easily penetrate and develop in the friable growing media.

### **Patio Planting**

Horticultural perlite is an ideal material for patio planting in container boxes, tubs and ornamental containers. Because a perlite soil mix is light in weight, handling headaches are reduced as planters filled with a perlite soil mix may be easily moved to rearrange a patio planting display or to protect plants against adverse weather. A suggested soil mix for patio planters is 1/3 horticultural perlite, 1/3 peat moss, and 1/3 composted wood product such as bark or shavings. Patio plantings will require more frequent watering than garden plantings as they tend to dry out faster.



*Shrubs or trees should be planted in a mixture of 1/3 soil, 1/3 horticultural perlite, and 1/3 peat moss or compost. Following planting, the tree or shrub should be thoroughly watered.*



*Lightweight horticultural perlite is an ideal material for patio plantings in container boxes, tubs, and ornamental containers.*

### **Roofscape Gardening**

For the apartment dweller with a limited outdoor roof garden, perlite can be of enormous benefit. The weight of planting mixes is very important when the strength of the supporting structure must be considered. Wet, sandy loam weighs from about 120-140 lbs/cu.ft (1920-2240 kg/cu.meter) while a soil mix consisting of equal parts of perlite and peat moss weighs only about 25 lbs/cu.ft (560 kg/cu.meter) when wet. As a result, a perlite growing mix can be several times as deep as a conventional soil mix without increasing weight. This enables the rooftop gardener to grow larger trees, shrubs and plants and to have more extensive gardens.