Authorized Trade Import and Export

Barish

Product & Trading Company Registration Number: 2758

PERLITE

What is Perlite?

Perlite is a natural silica volcanic rock that contains some water (2 to 5%) and is formed when volcanic lava, which is removed by heat between (400 and 1300 degree Celsius) emitted from volcanoes cools rapidly in a cooler atmosphere. Because of this rapid cooling, water vapor is trapped inside the rock and the entire molten rock becomes a glass-like structure. Perlite is naturally like glass rock. But before this process is brown and black.

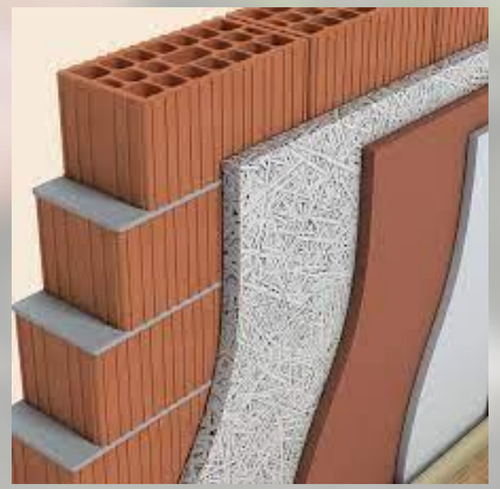
Barish

Application of Perlite

Agriculture and flower groweing industry greenhouse.

Construction and concrete (light blocks, Kenaf, etc.)

Casting, filtration, grinding denim fabrics



Barish

What is perlite, its properties and characteristics

The formation process is done by heating the glass rock to a very high temperature of about (850-900 Celsius). This converts the moisture inside the glass into steam and expands the stone 7 to 16 times its original size. This vapor expansion transforms the perlite from a dense dark rock into a light, white product into the perlite granules we know. In fact, when the perlite is quickly heated to a suitable temperature, its silicate structure softens and the water begins to evaporate, inflate, or spread a sticky mass to the bottom of the glass silicate bubble, causing it to burst. Consider popping popcorn for comparison. Volcanic popcorn is the nickname for this mineral.

Sample	SiO2	Al2O3	Fe2O3	CaO	Na2O	K2O	MgO
	%	%	%	%	%	%	%
محصول سیلیکون سرند	74.66	13.68	0.69	0.42	3.34	5.36	0.32

Sample	TiO2	MnO	P2O5	S	L.O.I
	%	%	%	%	%
محصول سیلیکون سرند	0.164	0.092	0.024	0.009	1.12

Barish

How to form perlite soil?

Perlite in hydroponics is mainly used for plant propagation because mineral perlite soil is neutral and sterile. Perlite soil encourages plant growth and germination compared to other materials, and you can definitely experience rapid seedling growth. It can be used as potting soil by mixing it with moss, peat or coconut. Unlike moss and peat, perlite soils do not decompose very easily, so you can store and use perlite for many years. Perlite soil mixture has very good aeration and drainage. As the roots grow in search of a source of water, a good drainage medium such as perlite forces them to grow rapidly and prevents the plant roots from rotting. Adding perlite is probably the fastest way to increase the drainage of your garden soil.

Barish

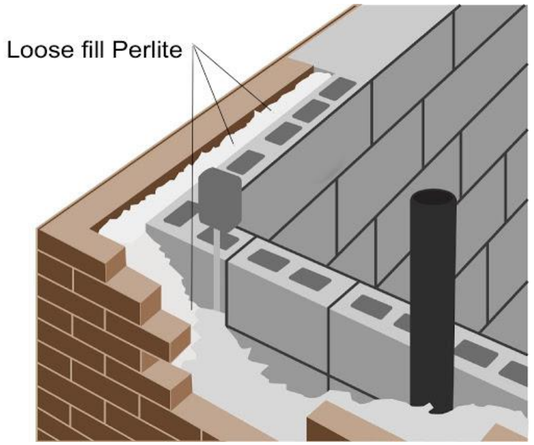
Properties of perlite soil:

This material is often used in industrial environments as well as in the garden. Perlite has an almost neutral pH. So you can use it to reduce soil acidity. It does not rot or decay, so its volume is small or does not disappear.

Barish

Construction materials industry

The classic application for perlite is its use as masonry in hollow core walls and masonry. Its pebbles are used for thermal and acoustic insulation as well as for height compensation. In addition, perlite is used as a hardener and adhesive in gypsum, gypsum base and mortar.



Barish

Perlite filter aid for chemical, pharmaceutical and food industries

Perlite is the most common auxiliary filter that meets all requirements. Compared to other filter aids, we mention these properties in terms of harmlessness to the environment and hygiene: this material has a neutral pH between 5.6 and 5.7, is chemically inert, very stable and It is almost insoluble. In addition, no odor or color is transmitted. The perlite filter aid is used in a wide range of applications such as the chemical, pharmaceutical and food industries. For example, it is widely used in the clarification of apple juice concentrate, the production of various vegetable oils and beverages. This mineral has also proven its usability for wastewater treatment, chemical filters and pharmaceutical products.

Barish

Perlite as insulation

Due to its unique properties, it is used to insulate cryogenic storage tanks at low temperatures, where supercooled gases can be stored and transported in liquid form. Therefore, perlite is used in the transportation industry to make liquefied natural gas tankers as a material for tank insulation, as well as in refrigerators as filling air conditioners in air separation plants.

Barish

Perlite in Metallurgy

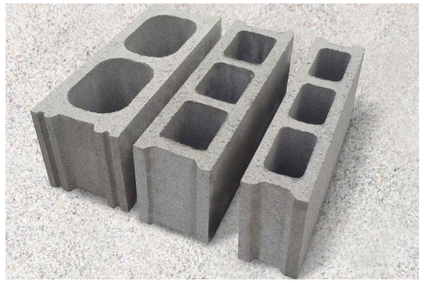
Perlite is used in iron and steel casting to insulate the molten metal surface in casting ladles and molds. Expanded perlite with a grain size of up to 5 mm should be poured onto the metal smelting surface on paper or polypropylene bags. When a metal is touched, the bag explodes and burns, while the perlite expands to the entire surface of the molten metal, forming an insulator that prevents the molten metal from cooling rapidly. The added materials on the surface become a profitable part, thus improving the quality of the base metal.

Barish

What is perlite block?

Perlite block is a natural and environmental building material. Perlite blocks are made from a combination of Portland cement, sand and special additives that are similar in appearance to ordinary blocks but have the following characteristics:

- The use of this type of blocks in housing saves construction energy consumption by up to 60%.
- These blocks are lighter than other blocks and have sound and heat insulation properties. The walls made of these blocks maintain the internal temperature of the room for a long time.
- Building structures are made simpler and lighter in the construction process using perlite, and also increase the seismic stability of the building.
- These blocks have a high fire resistance. They do not decompose over time, they are also ineffective on the environment, and they cannot affect any animal or plant species.

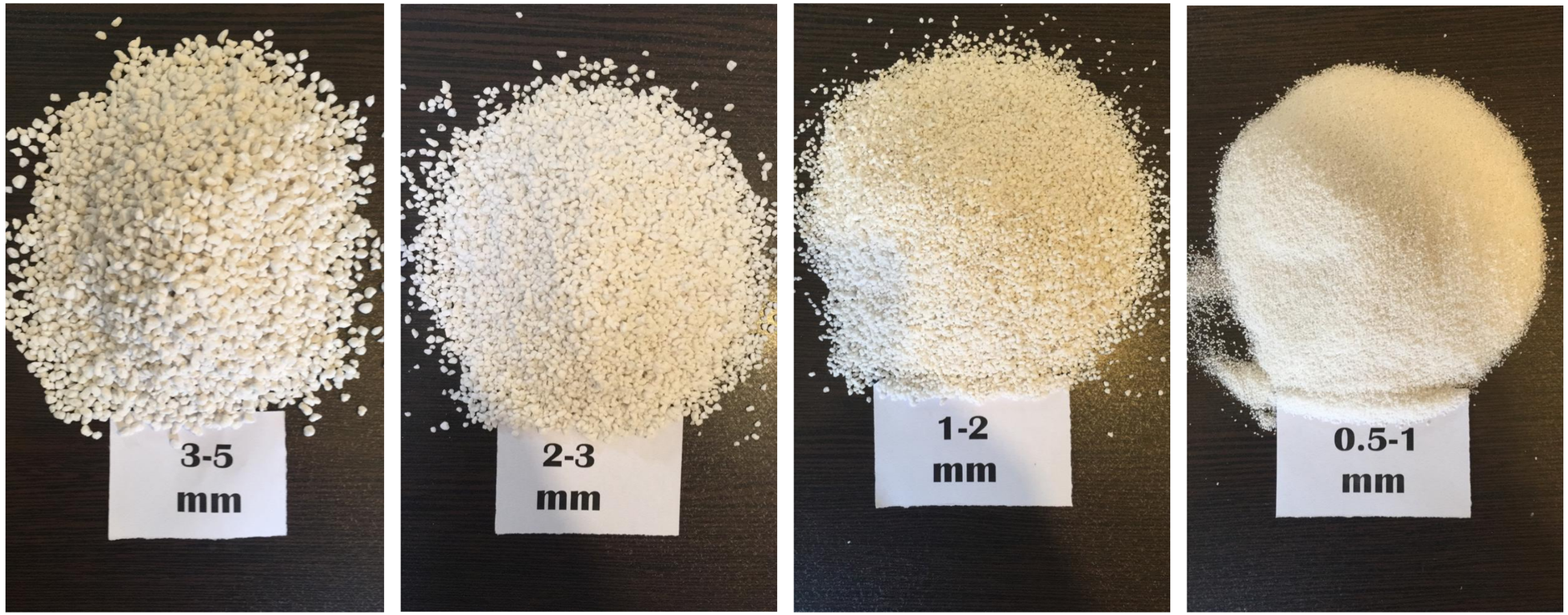




Barish

Perlite size

Perlite is available in different sizes. Its three main sizes are large, medium and small. Depending on which type of perlite you order and also the quality of perlite on demand, geographical environment and weight used can include different prices.



Barish