

What is Perlite?

Perlite is formed from a volcanic magma flow of pure alumina silicate glass deposited onto the surface of the earth where the molten glass cools and subsequently hydrates water. The purity of the perlite mineral itself, and the extent to which it is intermingled with pre-existing surface materials, varies considerably from deposit to deposit.

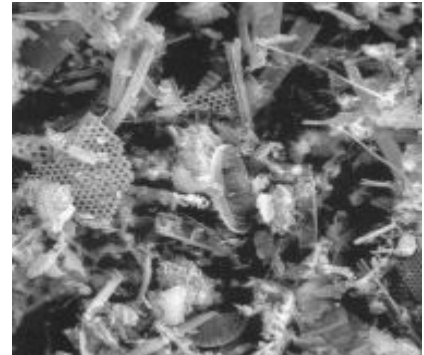
When granulated perlite ore is heated to 1,600 - 2,400 degrees Fahrenheit, it becomes molten glass, and the water of hydration within each granule is released as expanded water vapor. Accomplished rapidly and under carefully controlled conditions, this combination glass liquefaction/water vaporization event results in the virtual instantaneous explosive formation of partially fractured, low bulk density multicellular particles. Perlite's manufacturing process exploits the expansion characteristics of perlite ore, ensuring the consistent production of thin-walled particles which can be milled and/or air classified into very low density filter aids with highly predictable physical and chemical properties.



What is DE?

Diatomaceous earth, or D.E., is the skeletal remains of single-celled plants called diatoms. These microscopic algae have the unique capability of extracting silica from water to produce their skeletal structure. When diatoms die, their skeleta settle to form a diatomite deposit.

Diatomite is a soft powdery mineral resembling chalk and distinguished by a variety of shapes. This raw material is processed by drying, milling, sintering and air classification to give a finished filter aid which is predominantly silica.



Weight per cu. ft.		Usage per 10 sq. ft.		Loading Example 1760 sq. ft. Filter		Minimum velocity * to remain in solution	
8.9 #	15 #	.75 #	1.5 #	132 #	264 #	1.5 f.p.s.	4 f.p.s.
Perlite	DE	Perlite	DE	Perlite	DE	Perlite	DE

* By remaining in solution at a lower velocity, Perlite will not clog drainage pipes which can occur with D.E.

Particle size removal is virtually identical using Perlite instead of D.E. The major advantages of Perlite over D.E. are handling, disposal and health risks. D.E. has been deemed a carcinogen and must be disposed of as a hazardous waste, according to some Health Departments. According to the FDA, Perlite is classified the same as household flower (nuisance dust) and does not pose any health risks. Perlite does not have any stringent disposal criteria and may be suitable for discharge into sanitary sewers.

Bottom Line! Filter grade D.E. is a crystalline silicate. Crystalline silicates can cut the throat and lungs if inhaled. Perlite is an amorphous (un-crystallized) silicate, containing less than one tenth of one percent (.001) crystalline and is much safer to handle.