Calcium Clinoptilolite

Natural Zeolite

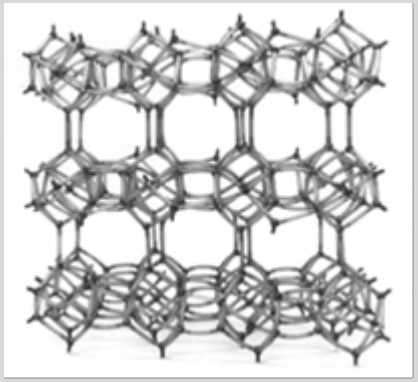
Zeolite is an organic mineral derived

from the reaction of volcanic activity and an alkaline water source. Zeolite is made up from a unique, crystalline lattice structure. Naturally arranged in a fixed and stable honeycomb framework built from aluminosilicates.

Clinoptilolite Zeolite is a rare mineral that possess a negative charge. The negatively charged alumina and neutrally charged silica tetrahedral building blocks are stacked to form the honeycomb framework

This structure allows the pores to attract and capture cations such as Ammonium, Calcium, Magnesium, and Potassium. Along with micro-nutrients such as Manganese, Zinc, Iron, and Copper. Zeolite holds ammonium and other nutrients in the crystal structure where they are not water soluble but are plant accessible on an as-needed and time-release basis. Zeolite has a high affinity for NH_4^+, which is a plant usable form of nitrogen. Zeolite will also take up Ca^{2+} from phosphate rock, releasing both phosphate and ammonium ions

Zeolite is a “tektosilicate,” meaning it consists of 3 dimensional frameworks of silicon-oxygen tetrahedrals, where all four corner oxygen atoms are shared with an adjacent tetrahedral.



The arrangement creates a deficiency of positive charge, which nets the negative charge that gives Zeolite the ability to exchange ions and operate as an effective soil amendment for lands and crops

Soil / Turfgrass

Animal Hygiene / Aquaculture

Amending Soil	Animal Waste Management	Animal Health
Calcium Zeolite valuable in holding and slowly releasing valuable nutrients to plants, mainly ammonium nitrogen (NH4+), potassium (K+), magnesium (Mg2+) and trace elements. As a result, it promotes better plant growth by improving the value of fertilizers. Zeolite can be applied to manure or compost to increase water retention, deliver nitrogen and other desirable plant nutrients.	Most of the remediation methods under consideration are capital intensive and cost prohibitive. Natural clinoptilolite zeolite is a proven, low cost, low impact solution that effectively binds ammonia and creates improved, stable N:P ratios in the manure.	Zeolite is characterized by its capabilities of absorption, adsorption, and cation exchange which makes it the ideal natural medium for the adsorption of ammonia, hydrogen sulfide and other gases. Because the pore openings within the structure are too small for nitrifying bacteria to enter and oxidize sequestered ammonia, the volatilization of this ammonia is restricted and the bacterial conversion to nitrate is mitigated.

Available by truckloads in super sacks or bagged