

Gondwana Zeolite – Ag Grade

The oldest zeolite on earth

The purest, hardest, most stable zeolite on earth

Age is important when it comes to the purity and stability of zeolite. Due to its geological age, Australia has the oldest known zeolite deposits in the world. Stability is one of the most important considerations when it comes to choosing zeolite for agricultural and horticultural purposes. Stable zeolite is a permanent asset which improves soil structure. Unstable zeolite compresses into the soil which does not improve its structure.

The Australian clinoptilolite zeolite supplied by Gondwana Zeolite dates back to the Carboniferous Period of the Palaeozoic Era. By this time the zeolite was solid, hard and structurally stable. It took tens of millions of years to get from the stage of being volcanic ash to solid mineral. The solid zeolite is approximately 55 million years older than the first dinosaurs.

Gondwana Zeolite is mined from a 305 million year old deposit. This zeolite is ancient, hard and stable. Overseas commercial deposits are between 2 million and 10 million years old. They are comparatively young, soft and unstable.

Formation of Old Australian Zeolite Deposits

More than 305 million years ago there was a huge range of active volcanos approximately where the Warrumbungles now stand. These volcanoes poured out a continuous stream of volcanic ash into the atmosphere. The prevailing winds carried the ash towards a vast reasonably shallow inland lake approximately 120 sq km in size which is bigger than Sydney Harbour. Much of the volcanic ash fell into this lake which was the perfect depth to form zeolite.

At this time the world looked a lot different to today. Gondwanaland was moving north west and Euroamerica was moving south, they collided to form the enormous continent of Pangea. The part of Gondwanaland which is now Australia was partly covered by heavy glaciations over long periods of time. These glaciations covered the zeolite deposit and contributed to its present day hardness and stability.

Over hundreds of millions of years the lake became solid with compacted zeolite which eventually turned into hard rock. The zeolite was further compressed by a heavy lava flow which solidified on top of it. During massive earthquakes which occurred about 5 million years ago the huge deposit of zeolite tipped on its side and the part of it which Gondwana Zeolite supplies was then covered by 6 metres of rock. This event compacted the zeolite even further and also, very importantly, kept it free of contamination. ***Australian zeolite is the purest, most stable and hardest zeolite on earth.***

Formation of Young Zeolite Deposits

Zeolite in young deposits is described as sedimentary rock, it is formed from aluminosilicates and other minerals. These sedimentary deposits of zeolite are between 2 million and 10 million years old. These deposits have not had time to compact, instead the consistency of the zeolite is powdery with small clumps which are easily crushed. The deposits are found either on top of the soil or in hills. Colours vary from white to tones of brown and green depending on which other minerals are contained in their composition.

American, European and Asian zeolites are young, soft and unstable, their analyses are inconsistent. These young zeolites also contain dissolved salts which have to be leached out before use.

Australian zeolite improves soil structure and moisture levels permanently

- Permanent asset, does not break down in soil
- Improves soil structure
- High water retention capacity reduces need for watering
- Improves fertilizer efficiency by releasing nutrients to plants on demand
- Recharging and slow release of both macro and micronutrients
- Reduces fertiliser loss through leaching or passing off as vapour
- Improves plant health, growth and yields
- Increases soil's cation exchange
- Lightly alkaline pH level helps sweeten acid soil
- Environmentally friendly