



**PRODUCT INFO
& DATASHEET**

ZEOLITE

Used in aquaculture, agriculture, animal husbandry etc.

1/ INTRODUCTION

Zeolite is a naturally occurring mineral, known for its absorbing properties as:

- * Possesses an excellent Cation Exchange Capacity (C.E.C.)
- * High efficacy for absorbing NH_3 , H_2O , CO_2
- * High efficacy of absorption, wet-absorbent and catalysis

All these properties cause Zeolite to be useful in many fields, such as aquaculture, agriculture, animal husbandry, environmental management and chemical industry.

Aquaculture

Ammonium is one of the most significant toxic metabolites in aquaculture. Zeolite is used effectively in removal of toxic ammonium ions from recirculating fish and shrimp ponds.

Other benefits:

- * Purifies the water quality of pond and absorbs the stink rapidly.
- * Adjusts the pH rate and create a great water quality to provide plankton an excellent breeding environment.
- * Improves mold of pond to make a best ventilation for soil.
- * Absorbs the organic materials of water and dangerous gas.
- * Contains many kinds of mineral materials, stimulates the growth of plankton, functions as a natural food for fishes and shrimps.

Agriculture

Zeolite functions as an absorbent in the way that parts of the fertiliser are not easily leached out or evaporated, but remains longer in the soil. This will prolong the possibility of absorbing by the plant. In addition, it means an increase in the potential plant production (crop).

Other benefits:

- * Able to neutralize soil pH and deodorize after fertilisation.
- * Holds water penetrated, stores and releases according to the plants need.
- * Absorbs the harmful gas in the soil, and prevents the root from rotting.
- * High water retentiveness and ventilation, keeps soil in soft and reduces the situation of soil mass.

Animal husbandry

Zeolite can be used as feed supplement for animal breeding (swine, ruminant and poultry), based on reducing the amount of food and raises its value quality. The animal will get more benefit from the same amount of food, while otherwise the nutrient will be released more readily through the excrement.

Other benefits:

- * Stimulates the linings of the stomach and intestine to produce more antibodies, inhibits disease.
- * Converts feedstuff ingredients from nitrogen to animal protein for better assimilation of calcium and other nutrients resulting in better growth rate.
- * Absorbs ammonia, carbon dioxide, sulfidric acid and extra water contained in the stomach / intestine, prevents digesting difficulties.
- * Keeps breeding environment in dry and hygienic condition.



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Environmental management

Zeolite is used as an ion exchanger in the purification of ground water and sewerage effluent and removal of heavy metals and radioactive ions from industrial effluent.

Other benefits:

- * As drinking water filter, air purification, drier.
- * Eliminates water harshness, smell and color.
- * As deodorizer for toilet, kitchen, refrigerator and hospital.

Chemical industry

- * As absorption for NH₃, H₂O, CO₂ and other dangerous gases.
- * As additive in the process of making paper, it can improve the effect of printing.
- * As antiblock agent or decolorant in the petrochemical industry.
- * As pigment additive.
- * As absorbent function in petrochemical and as catalysis in chemical industries.

2/ TYPICAL CHEMICAL ANALYSIS

NH ₄	135 - 195 mg/100 gr
Si	min. 60%
Moisture	max. 6.5%
<u>Trace elements</u>	
Cu	9.4 ppm
Fe	7081.4 ppm
P	50.0 ppm
Zn	98.0 ppm
Mn	397.5 ppm
Sr	218.8 ppm
K	15937.9 ppm
Ca	23620.8 ppm
<u>Heavy metal ions</u>	
Pb	18.0 ppm
As	4.25 ppm
F	179 ppm
Particle size	8 - 325 mesh

3/ DOSAGE (only spray in sunshine)

<u>Type</u>	<u>Dosage</u>
For bottom of the pond	Spray in sunshine: 182 - 364 kg/acre
To absorb the poison of the pond	Spray in sunshine: 61 - 212 kg/acre
To improve the base	Spray in sunshine: 61 - 303 kg/acre
To improve the lack of oxygen	Spray in sunshine: 61 - 212 kg/acre

Do not use at night, during overcast and rainy weather.

It is recommended to spray in bait casting areas only after 2 hours of continuous sunshine.

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