

# ZEOLITE CLINOPTILOLITE

APPLICATION AS



## FEED ADDITIVE POULTRY

### MULTI-FUNCTIONAL FEED ADDITIVE

**Toxin Binder:** Toxins cause low egg yields, decrease in broiler weight, damages to liver and kidneys, weaknesses in the immune system and increasing mortality rates for the poultry. Adding Zeolite - Clinoptilolite minimizes the negative effects of the aflatoxins on the feed efficiency ratio, performance and feed consumption. Adding Zeolite at a ratio of 0,5% in weight to the feed adsorbs aflatoxins at a 97% rate. It eases digestion and provides an effective feed consumption.

**Ammonia Adsorbent:** Toxic ammonia is as dangerous as the toxins. Zeolite adsorbs the ammonia in animal feces and urine at very high rates. It decreases the toxicity level of ammonia.

**Heavy Metal Remover:** Thanks to this superior cation exchange capacity, Zeolite can adsorb heavy metals like Ni, Pb, Hg and Cd.

**Anti-caking & Flowability Agent:** Through its ability to adsorb moisture and grease, Zeolite prevents the oxidation and molding that might occur during storage as a result of moisture. It acts as a great pellet binder and anti-caking agent in preparation of the feed. It prevents the liquid oils that are added in order to increase the ration energy, from being released and becoming oxidized during storage.

Zeolite is a sustainable and cost effective toxin binder. It is 100% natural and safe.

Zeolite, when applied to egg-laying poultry,

- Increases the feed conversion rate.
- As it leads to increase in the functionality of calcium, it improves the quality of eggs' crust and it prevents the production of eggs with cracked or no crust.
- Prevents the eggs' crust from having a smooth surface.
- Helps the eggs have a natural color.
- Extends the shelf life of eggs.
- Increases the egg yield. Aged broilers' yield is increased towards the standard yield.
- Prevents the negative consequences that mycotoxins normally lead to the occurrence of.

Zeolite, when applied to broiler poultry,

- By binding them removes mycotoxins and heavy metals from the broiler's body.
- Extends the shelf life of the meat by providing for the production of high-quality meat.
- Increases the feed conversion rate.
- By strengthening broilers' bone structure, it prevents the leg bone irregularities, which are commonly observed in broiler poultry husbandry.
- Prevents the spoiling of the homogeneous look of the broiler poultry stock.
- Decreases the water content of the poultry feces.
- Decreases the occurrence of diarrhea.
- Provides high resistance against Salmonella.

### WHAT DISTINGUISHES ZEOLITE FROM OTHER MYCOTOXIN BINDERS?

While other mycotoxin binders act like a sponge that adsorbs everything including vitamins, amino acids and nutrients together with mycotoxins, Zeolite is a selective polar binder that has a binding affinity and selectivity only for positively-charged ions (cations) such as toxins, ammonia and heavy metals. It has no binding affinity for antibiotics, coccidiostats, vitamins, minerals, amino acids, other nutrients or feed additives.

### HIGH ECONOMIC RETURNS WITH A LOW COST

Zeolite yields high economic benefits with only a little expenditure. It decreases mortality rates. It increases the endurance, quality and shelf life of the feed.

Zeolite can be safely substituted for sodium bentonite or other rumen buffering agents.



**SUSTAINABLE AND COST EFFECTIVE  
TOXIN BINDER**

**ENVIRONMENT FRIENDLY PRODUCT  
SAFE & 100% NATURAL**

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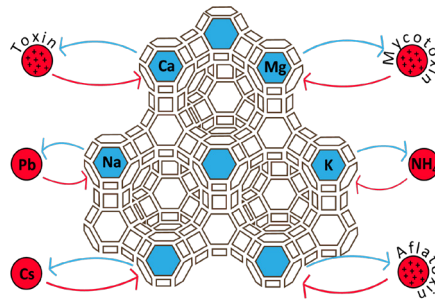


## CONTENT

Zeolite is a crystalline, hydrated aluminosilicate that has an infinite three dimensional structure. Rota Mining's Zeolite contains extremely pure Clinoptilolite (92% by mass on average), which is one of the most effective Heulandite type of zeolite. Its highly porous structure (with a porosity reaching 50%) provides an extremely large surface area on which chemical reactions and cation exchanges can take place at a very high degree. It can absorb incredible amounts of water/liquid into its pores. Clinoptilolite has a natural negative ion charge which furnishes it with a tremendously high cation exchange capacity (CEC). Thanks to CEC, it adsorbs and binds ammonium, toxins, mycotoxins and heavy metals like Ni, Pb, Hg and Cd, very efficiently and effectively.

## CATION EXCHANGE CAPACITY

Cation exchange capacity (CEC) is a measure of the amount of cations (positively-charged ions) that a clay can catch. As mycotoxins, toxins, heavy metals and ammonium are all positively charged, they are all easily trapped by cation exchangers. Clinoptilolite from Rota Mining's Gordes / Manisa reservoir possesses by far one of the highest CEC rates (as high as  $170 \text{ cmol} \cdot \text{kg}^{-1}$ ) among all reservoirs in the world. Purity and CEC are the two vital parameters that define the quality of zeolite mineral.



## THE PRODUCER, ROTA MINING

Rota Mining is the leading natural Zeolite - Clinoptilolite mineral producer and exporter in Eurasia. It was founded in 1995. Since 2003, it is only specialized in the production and the marketing of its own natural Zeolite mineral; and is committed to setting the standards for the natural zeolite industry in the world. It carries out its production under Fami-Qs quality control system since 2007. Thanks to the high purity of its ore and to the quality of its service, Rota Mining serves its products to more than 50 countries in the world.



**MINIMUM  
80% PURITY  
GUARANTEE**



## APPLICATION FOR POULTRY

Add to the feed mixer together with other feed ingredients and mix thoroughly and homogeneously. Compatible with all types of feed ingredients.

Unless your nutritionist does not advise a different rate:

Mix with the animal's daily feed at a rate of 0,5 - 2 % by mass.

## SUITABLE SIZES

- 0 - 400 micron
- 0 - 300 micron
- 0 - 200 micron
- 0 - 100 micron
- 0 - 50 micron

## ENVIRONMENT-FRIENDLY

100% natural and safe product; produced in accordance with the EU's Feed Additive and Premixes directive and under the strict quality control system and surveillance of FamiQs. Zeolite is not a medicine or nutrient. It can't be used for therapeutic purposes.

Information herein is accurate to the best of our knowledge, but may be subject to change without notice. Suggestions are made without warranty or guarantee of results. Before using, user should determine the suitability of the product for its intended use and user assumes the risk and liability in connection herewith.



**FAMI<sup>®</sup>QS**

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