



## PRODUCT CARD

ECO-PLON VOLCANIC MINERALS

NATURAL, MINERAL, ECOLOGICAL  
PRODUCT MADE OF VOLCANIC LAVA



ECO-PLON VOLCANIC MINERALS – ecological, mineral soil properties improving agent and is a mineral composition of volcanic lava and sedimentary rocks, dedicated for spring cereals cultivation.

### FOR SPRING CEREALS CULTIVATION

- 100% natural, ecological, rich in macro and microelements
- Improves the quality of consumable and fodder cereals
- Strengthen the wheat against overdrying and lodging
- Adjusts mineral balance of the soil
- Has an influence on the crops - increases yielding 5 – 20%

The product is natural and supports plant development by improving the physicochemical properties of the soil and providing necessary macro and microelements.

### ADMISSIONS AND CERTIFICATES



The product was made on the basis of the invention, registered and processed as a patent in PCT system in Geneva for 148 countries.

The product has research and opinions of:  
New Chemical Syntheses Institute in Puławy,  
Institute of Horticulture in Skierniewice to use for:

- cultivation of vegetable plants
- cultivation of fruit plants
- cultivation of ornamental plants and lawns

Institute of Soil Science and Plant Cultivation State Research Institute

- Department of Plant Nutrition and Fertilization
- A testimony of qualification of the product under the name of ECO-PLON VOLCANIC MINERALS to use in ecological agriculture under reference NE/360/2017
- European Green Leaf Certificate
- European Guarantee of Highest Quality

## GENERAL CHARACTERISTICS

- Powdered, granulated and micro granulated form
- Contains natural macro and microelements necessary for plants growth, fine development of root system and aboveground part
- Optimal pH level  
=5,3 – 7,5 barley cultivation  
=5,3 – 7,5 wheat cultivation
- In the powdered form, additionally NO<sub>3</sub> up to 2% and NH<sub>4</sub> up to 0,25%
- Has a beneficial impact for a yielding growth up to 15%

## MACRONUTRIENTS:

6 easily assimilable macronutrients in the oxide form:

Calcium	CaO	to	7,50%
Phosphorus	P <sub>2</sub> O <sub>5</sub>	to	0,70%
Potassium	K <sub>2</sub> O	to	2,95%
Magnesium	MgO	to	5,90%
Sulfur	SO <sub>3</sub>	to	0,80%
Sodium	Na <sub>2</sub> O	to	3,00%

## MICRONUTRIENTS:

Manganese	Mn <sub>2</sub> O <sub>3</sub>	to	0,30%
Titanium	TiO <sub>2</sub>	to	1,30%
Iron	Fe <sub>2</sub> O <sub>3</sub>	to	10,50%
Aluminium	Al <sub>2</sub> O <sub>3</sub>	to	13,00% (in assimilable 3% - 5%)
Silicon	SiO <sub>2</sub>	to	54,00% (in assimilable 5% - 8%)
Copper	CuO	to	0,05%
Zinc	ZnO	to	0,02%

Trace amounts / sufficient for plants / of chlorine, nickel, niobium, hafnium, molybdenum, zirconium, vanadium, lithium, chromium, strontium, selenium

It is recommended to use the mixtures with enhanced dose of Phosphorus and Magnesium. After content of the nutrients in the soil is determined, supplement the deficits which the mixtures which contain those minerals.

## PROPERTIES OF THE MINERALS

- Minerals occur in the form of oxide, easily assimilable
- Phosphorus and potassium enhance root system
- Sulfur facilitates absorbing nitrogen by plant; necessary for protein synthesis in the plant
- Silicon impacts on stiffness of the stalks – the stalks are resistant for lodging, creates a natural barrier for pathogens which attack the plant, adjusts absorption of phosphorus uptaken by the plant
- Titanium increases the activity of iron ions, stimulates uptake of nutrients from the soil

- Due to sorption properties of the product, there is an opportunity of delivering the optimal amount of nutrients from the soil
- Enhance the plant against lodging and water scarcity
- The product is not leached into the ground water

#### THE APPLICATION OF THE PRODUCT IMPACTS ON:

- Soil crumbling, which is more aerated and enables easier absorption of macro and microelements by the plant
- Remineralization of the soil and creation of humus
- Slow and systematical release of nutritional products – provides a long-term supply of the nutrients to the plant
- Mineral balance of the soil and plants
- Increased activity of soil microorganisms
- An amendment of sorption properties, especially for light soils
- Resistance to biotic stress (viruses, bacteria, fungus, nematodes, insects) and abiotic stress (physical and chemical stress factors)

#### THE SYSTEM OF APPLICATION

- Date of application – before sowing
- A dose of 2 – 3 tons per hectare before sowing
- At the level of humus over 80% of nutrients
- A dose of 3 – 5 tons per hectare before sowing
- At the level of humus 50 – 70%
- A forecrop in the form of legumes or pulses is recommended
- It is necessary to control the rotation system of the crops

Propagate the substance steadily on the soil surface and plough to the depth to 20 cm.

#### BEFORE THE SEEDING

It is recommended to initiate the seeds with ECO-PLON VOLCANIC MINERALS for grain initiation (powdered form).

2 - 3 days before the sowing, mix the seeds with the dressing,  
In a dose of 1 tone of dressing per 10 tons of seeds,  
Leave in a dry place until sowing.

#### WE WILL REACH:

- The destruction of pathogens and pests parasitizing on the grains.
- Providing the nutrients to sprouting grains.

#### TYPES OF PRODUCTS:

- Powdered
- Granulated
- Micro granulated

## STORAGE

Store in a dry warehouse or under the shelter, in correctly marked, original packaging. Keep dry.

- No possibility of expiration
- No possibility of over-feeding
- Natural, non-toxic product
- Keep away from children
- Avoid contact with eyes
- Avoid inhaling product dust
- Work in accordance with the principles of OSH.

## IN CASE OF DUST GOT INTO THE RESPIRATORY TRACT:

- Carry the injured person into the fresh air
- Use dust masks in case of large dustiness

## PACKAGING AND TRANSPORT

Packaging:

- Plastic or paper bags – 20 kg
- Big-bag 500 – 1000 kg
- Transport on pallets

## SERVICE AND CONSULTING

We provide professional advice in the area of adjusting the product to the type of soil and needs of plants. We collaborate with the Institutes IUNG and INSH in Puławy, Institute of Horticulture in Skierniewice, Wrocław University of Environmental and Life Sciences, The Faculty of Life Sciences and Technology, Department of Plant Nutrition, "Poltegor – Instytut" Institute of Open Cast Mining.

# AINEG-POL

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