



# **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 wine grapes cultivation.

# FOR WINE GRAPES CULTIVATION

- -Natural, ecological, rich in macro and microelements
- -Increases yielding and improves the quality of fruits
- -Enhances plants and protects from freezing, overdrying and lodging
- -Adjusts mineral balance of the soil
- -Enhances the taste quality of fruits
- -Deep and intensive color of juice, wine

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 form, granulated and micro granulated form
- -Contains natural macro and microelements necessary for plants growth, fine development of root system and aboveground part
- -Optimal alkaline pH
- -Has a beneficial impact for a yielding growth up to 30%

## MACRONUTRIENTS:

8 easily assimilable macronutrients in the oxide form:

Calcium	CaO	to	14,00%
Phosphorus	$P_2O_5$	to	0,50%
Potassium	$K_2O$	to	0,50%
Magnesium	MgO	to	11,00%
Sulfur	SO <sub>3</sub>	to	0,10%
Sodium	Na <sub>2</sub> O	to	3,10%
Nitrogen	NO <sub>3</sub>	to	2,00%
Ammonium	NH₄	to	0,25%

#### MICRONUTRIENTS:

Manganese	Mn <sub>2</sub> O to	0,30%
Titanium	TiO <sub>2</sub> to	0,80%
Iron	Fe <sub>2</sub> O <sub>3</sub> to	10,90%
Aluminium	Al <sub>2</sub> O <sub>3</sub> to	12,00% (in assimilable form 3% - 5%)
Silicon	SiO <sub>2</sub> to	48,00% (in assimilable form 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

#### PROPERTIES OF THE MINERALS

- -Minerals occur in the form of oxide, easily assimilable
- -Guarantee big, tasty grapes
- -Cause intensive growth of wine grapes and new seedlings
- -100% natural and ecological
- -Silicon impacts on stiffness of the stalks, creates a natural barrier for pathogens which attack the plant
- -Titanium increases the activity of iron ions, stimulates uptake of nutrients from the soil
- -Minerals enhance the plant against biotic stress and pest attack
- -Due to sorption properties of the product, there is an opportunity of delivering the optimal amount of nutrients from the soil

- -Strengthen the plant against freezing 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
- -Increased activity of soil microorganisms
- -Taste quality and intensive fruits color
- -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 setting up a plantation
- -A dose of 3 5 tones per hectare before skimming
- -At the level of humus over 80% of nutrients
- -A dose of 3 5 tons per hectare before skimming
- -At the level of humus 50 70%

Propagate the substance steadily on the soil surface, in swaths to 1 meter of rows of planting. In case of establishing a plantation, it is recommended to use 0,5 kg into a hole under the roots.

#### 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 bags 1 20 kg
- -Paper bags 5 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.



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