

NANO-ZEO

Chelated Nano Fertilizer with Volcanic Base

1. PRODUCT DESCRIPTION

Nano-Zeo is an innovative chelated nano fertilizer with a volcanic base, designed for foliar and root application. This advanced technology product combines the efficiency of nanomaterials with the natural properties of volcanic minerals, providing a sustainable and effective solution for plant nutrition.

2. TARGET MARKET SEGMENTS

- Home Gardening & Hobbyists
- Public Green Spaces
- Landscaping Companies
- Golf Courses
- Nurseries
- Urban Maintenance

3. CHEMICAL COMPOSITION

Component	Concentration
Clinoptilolite	60%
Montmorillonite	30%
Amorphous Silica	10%
Nanosilica	3-5 nm
Nanopotassium	Present
Nanophosphorus	Present
Micronutrients (Fe, Zn)	Traces

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4. PHYSICAL CHARACTERISTICS

PARTICLE SIZE
50-100 μm

SPECIFIC SURFACE AREA
120 m^2/g (BET)

BULK DENSITY
0.6-0.7 g/cm^3

COLOR & APPEARANCE
Light gray, fine powder

MOISTURE CONTENT
 $\leq 5\%$

PH (1:10 SUSPENSION)
 7.5 ± 0.2

5. CHEMICAL PROPERTIES AND ADSORPTION

CATION EXCHANGE CAPACITY (CEC)
120 meq/100 g

TOTAL POROSITY
0.25 cm^3/g

NITROGEN (N)
5%

PHOSPHORUS (P)
3%

POTASSIUM (K)
4%

IRON (FE)
0.2%

ZINC (ZN)
0.2%

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6. VALUE PROPOSITION

- ✓ Significantly increases water and nutrient retention in the substrate
- ✓ Reduces irrigation frequency and conventional fertilizer use
- ✓ Improves root health and optimizes substrate aeration
- ✓ 100% natural and ecological, suitable for domestic and professional use
- ✓ Attractive packaging with sustainable storytelling

7. RELEASE MECHANISM AND FUNCTIONALITY

Controlled Release by Diffusion and Ionic Desorption

Nano-Zeo's controlled release system ensures optimal nutrient availability throughout the crop cycle, minimizing leaching losses and maximizing use efficiency.

20%

First week

80%

60 days

- ✓ Significant reduction in nutrient leaching
- ✓ Greater nutrient availability over time
- ✓ Improved crop nutritional efficiency

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8. APPLICATIONS AND DOSAGE

Crop Type	Recommended Dosage	Application Timing
Cereals	100-200 kg/ha	At sowing time
Fruit Trees	150-250 kg/ha	At cycle start
Vegetables	50-100 kg/ha	At transplanting
Nurseries	1-2% w/w	In substrate
Fertigation	0.5-1 g/L	In suspension as per schedule

9. FORMATS AND PRICING

Small Format

1 kg

(2.2 lb)

Large Format

3 kg

(6.6 lb)

Distribution Channel: Initial offers available on Amazon with fast shipping.

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10. INSTRUCTIONS FOR USE

- 1** Mix homogeneously with soil or substrate before sowing or transplanting.
- 2** For fertigation application, dissolve in water at a rate of 0.5-1 g/L and apply according to established irrigation schedule.
- 3** Maintain soil moisture between 60-80% of field capacity to optimize nutrient release.
- 4** Do not combine with agrochemicals of extreme pH (< 4 or > 9) or high salinity to avoid product degradation.

11. STORAGE AND SHELF LIFE

Storage Conditions

Location:	Cool, dry place	Temperature:	5-35 °C
Protection:	Avoid direct sunlight	Packaging:	Sealed laminated polypropylene
Shelf Life:	24 months from manufacture	Caution:	Keep out of reach of children and pets

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12. IMPORTANT NOTES

Precautions: This product is for agricultural use and should be handled by trained personnel. In case of contact with eyes or skin, wash thoroughly with water. In case of accidental ingestion, seek immediate medical attention.

Warranty: The manufacturer guarantees product quality when stored and used according to recommendations. Manufacturer liability is limited to product replacement in case of proven defect.

Certifications: Product certified for use in organic agriculture. Complies with international food safety and environmental standards.