

Introducing NATURE GUARD 360



Learn about Nature Guard 360, an innovative, eco-friendly solution designed to address a wide range of pollutants while economically regenerating improved soil and water quality.

Nature Guard 360

Nature Guard 360 is an innovative, eco-friendly, biochar/carbon-based soil and water quality treatment designed to address multiple pollutants.

This high-performance solution is engineered to filter, adsorb, and treat both soluble and dissolved contaminants in soil and water, restoring and enabling long-term protection of public health and the environment.



High Performance Green BMP



Filtration and Adsorption

Removes a wide range of contaminants, including heavy metals, PFAS, nutrients, pathogens and organic pollutants, through advanced "green carbon" filtration and adsorption processes.



Long-Term Protection

Enables long-term protection of public health and the environment by restoring soil and water quality, and regenerating healthy microbial activity, reducing the need for ongoing treatment.



Soluble and Dissolved Contaminants

Treats both soluble and dissolved contaminants in soil and water, addressing a broader range of pollutants compared to traditional BMPs.



Engineered for High Performance

This next-generation BMP is designed with innovative, ecofriendly technology to provide superior performance and efficiency in treating a wide variety of contaminants.

Nature Guard 360 represents a **transformative solution for soil and water quality**, offering advanced filtration, adsorption, and longterm protection to safeguard public health and the environment.

Next Generation "Green" Filtration Biotechnology

Proprietary Adsorption/Filtration Technology

Modular and Versatile Design Application

Nature Guard 360 utilizes a proprietary combination of biochar and green carbon technology to effectively treat a wide range of pollutants, including heavy metals, nutrients, pathogens, pesticides, and PFAS 'forever chemicals', from runoff and soil.

Nature Guard 360's modular design allows it to be seamlessly integrated into green infrastructure projects in cities, parks, and other community spaces, providing a sustainable and effective solution for environmental protection.

Applications

Enhanced Stormwater Filtration

Nature Guard 360 filters and removes a wide range of pollutants from stormwater runoff, including heavy metals, nutrients, and organic contaminants.

Nutrient Runoff Reduction

The biochar and carbon-based technology in Nature Guard 360 helps bind and retain nutrients like nitrogen and phosphorus, preventing them from leaching into waterways.

Expedite Establishment of Vegetative Cover

Nature Guard 360's proprietary biochar blend helps to speed vegetative growth and reduce need for high applications of synthetic fertilizers and herbicides.

Heavy Metal and Pollutant Binding

Nature Guard 360 effectively adsorbs and sequesters heavy metals, PFAS 'forever chemicals', and other toxic pollutants, keeping them out of soil and water.

It can also be used as a protective buffer or polisher in areas that have previously been remediated for heavy metals and other toxics.

Carbon Sequestration

Nature Guard 360's biochar and green carbon technology helps capture and store atmospheric carbon in the soil, contributing to climate change mitigation.

Soil Health Improvement & Protection

The addition of Nature Guard 360 enhances soil structure, increases water holding capacity, and promotes the growth of beneficial microbes and fungi, improving and protecting overall soil health.

Unmatched Performance in Pollutant Removal

Pollutant	Removal Efficiency
Heavy Metals	Up to 100%
PFAS Forever Chemicals	98-99%

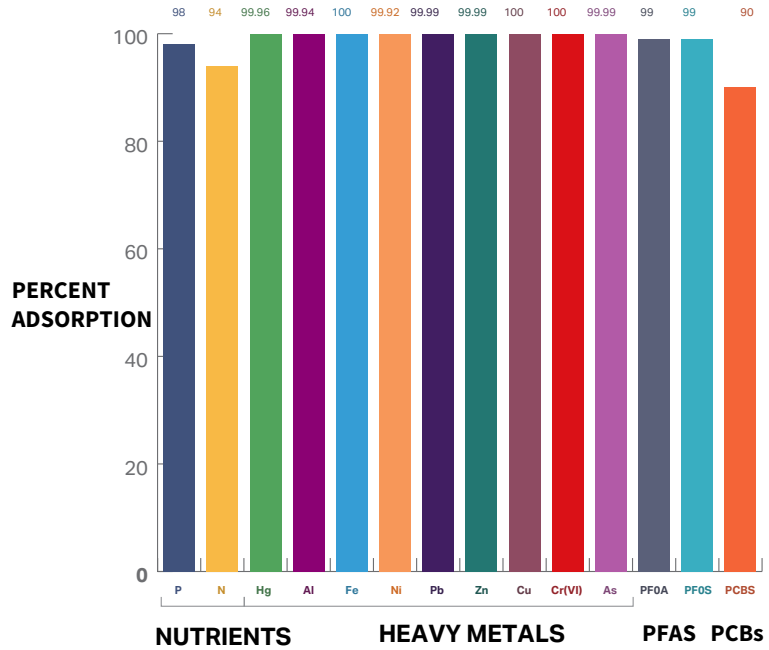
Unmatched Performance for Multi-Pollutant Treatment

Nature Guard 360 efficiently removes:

- Heavy Metals (up to 100%)
- PFAS Forever Chemicals (98-99.9%)
- Nitrogen (up to 99%)
- Phosphorus (99%)
- Organic Pollutants and Microbial Contaminants (90-100%)

*Results using 1-5% Nature Guard 360 Product

POLLUTANT REMOVAL



Copyright - D.Lueckenhoff

Product Specifications

Property/Parameter	Info/Units/Value
Product Name:	Nature Guard 360 Tailored Engineered and Blended Biochars
Feedstock	Various-Ag-based materials
Production Process	Gasification/Pyrolysis - Temperatures - 1200 F-1800 F & Nature Guard 360 Proprietary Activation
Particle Size Distribution ASTM granular	<.4-2.0 mm ASTM distribution-Variou mesh sizes available
Composition:	Natural carbon charcoal/Activated
Chemical Safety:	Inert-Non-Toxic; Recalcitrant
Inherent Moisture (%)	~10-20%(wood <5%)
Average Ash (%)	~35-75% (wood <14%)
Organic Carbon (%)	~25-80% (wood =80+%)
Organic Nitrogen (%)	~.57-2.4
Fe	<.82%
Mg	<4%
Average Surface Area (m2/g)	~150-263 (wood~490)
pH	8-11 (wood~8)
Cation Exchange Capacity (CEC)	40++cmol/kg (wood~3-4 cmol/kg)
Infiltration Rate or Hydraulic Loading Capacity	110-118 in/hr. (wood=169 in/hr)
Densities	550 lbs. - 800 lbs./CY depending upon feedstock
Molar Ratio (H:C)	.25-7
Types	Screened; Blended: Activated

Instructions for Use



Soil Preparation

Homogeneously mix the pre-determined amount of Nature Guard 360 amendment into the upper soil layer at a depth of 4-6 inches at a rate of 1-3% mass volume of soil for optimal soil health and performance. It is preferable to wet the material down before mixing to minimize fines in the air.



Application Methods

Deposit the pre-determined quantity of Nature Guard 360 on the soil surface at the target depth by hand or machine. Wet down the product prior to or immediately after spreading. Nature Guard 360 can also be pre-blended with mulch or clean compost at a 1:3 ratio (1 inch:3 inches) and applied as a 4-inch layer before adding topsoil and vegetation.



Mixing Techniques

Use a rotovator or disc harrow to evenly mix the Nature Guard 360 product into the upper soil layer. Ensure the product does not remain above the soil surface, as this can lead to wind erosion and air quality issues. May also be done manually, depending upon project size.



Compost Blending

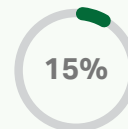
Nature Guard 360 can also be premixed with compost or mulch in a 1:3 or 2:2 ratio (Nature Guard/Compost) for improved vegetative growth, then applied with a compost spreader followed by a tiller. Nature Guard will not only enhance the performance of compost, but also eliminate compost leachates such as heavy metals.

Why Choose Nature Guard 360?

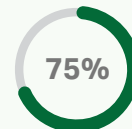
Comparison of initial and maintenance costs



Initial Costs



Maintenance Costs



Pesticide/Chemical Reduction
Improved Soil Health & Water Quality & Quantity Benefits



Transformative Impact

Nature Guard 360 is an innovative, eco-friendly solution that supports a regenerative future by enhancing soil, water, and ecological health. It decreases the need for pesticides and fertilizers, increases water holding capacity, and reduces greenhouse gas emissions.

Use Nature Guard 360 for long-lasting healthy protection & investment!

Let's protect
together.

GET STARTED WITH
NATURE GUARD 360
TODAY!

To learn more about Nature Guard 360, contact:
Info@NatureGuard360.com