

Technical Data Sheet

Aspergillus niger

Soil Inoculant for Plant Growth & Compost Efficiency

Aspergillus niger is a spore-forming fungal biofertilizer used to enhance nutrient availability, plant vigor, and composting efficiency in soil systems. Known for its powerful organic acid production and enzymatic activity, *A. niger* solubilizes phosphorus, potassium, and key micronutrients, while breaking down organic matter to improve soil texture and fertility. This biostimulant supports early root development, enhances plant tolerance to abiotic stress, and accelerates compost maturation, making it ideal for sustainable, organic, and regenerative farming systems.

- Solubilizes phosphates and potassium to increase macronutrient bioavailability
- Enhances plant growth and root development through microbial metabolite activity
- Breaks down organic matter to improve soil structure, moisture retention, and humus formation
- Increases composting efficiency and nutrient density of finished compost
- Supports microbial diversity and soil health through competitive exclusion

Technical Data

Concentration (CFU/g):

- 10 billion (1.0×10^{10}) CFU/g dry powder
- Custom concentrations available upon request

Particle Size (Mesh):

- Passes through 100 mesh sieve

Packaging Options:

- 13 lb (6 kg) pails
- 24 lb (11 kg) pails
- 198 lb (90 kg) drums
- Smaller custom packaging available on request

Shelf-life:

- 18 months at room temperature
- 24 months refrigerated

Storage Recommendations:

- Store in a cool, dry location away from direct sunlight.
- Reseal container tightly after each use.

Application Rates

Soil Application (Drip, Drench, or Fertigation)

Dosage:

- 250 to 500 grams per acre (600 to 1,200 grams per hectare)

Frequency:

- Apply during early root establishment or transplanting
- Reapply every 2–4 weeks during active growth stages as needed

Application Method:

- Dissolve thoroughly in water (ensure enough dilution volume to fully saturate the root zone)
- Use an agitation tank or manual stirring to maintain microbial suspension
- Apply through drip irrigation lines, micro-sprayers, or fertigation systems, positioning flow as close to the root zone as possible
- Flush the system after application to prevent clogging or residue buildup
- Do not tank mix with herbicides, fungicides, bactericides, or chemical pesticides

In-Furrow

Dosage:

- 100 to 250 grams per acre (250 to 600 grams per hectare)

Frequency:

- Apply once at planting to target root initiation and early growth stages.

Application Method:

- Dissolve microbial powder thoroughly in water
- Apply directly into the seed furrow or planting trench at seeding time
- If using irrigation systems for delivery, ensure solution contacts the root zone
- Maintain agitation to prevent settling

When tank-mixing with fertilizers:

- Dilute fertilizer fully in water first before adding *Bacillus coagulans*
- Do not mix with herbicides, fungicides, bactericides, or pesticides

Composting or Organic Matter Amendment

Dosage:

- 30 to 80 g per ton of compost, organic substrate, or potting mix. Higher rates may be used for difficult-to-degrade materials or highly competitive compost environments.

Frequency:

- Single application before use or at the beginning of composting/soil blending

Application Method:

- For composting, first dissolve powder in water. Then spray piles and turn to evenly distribute product through the piles/windrows.
- For organic matter amendment, evenly mix the dry microbial powder into the growing media during turning or mixing

Disclaimer: Results may vary depending on environmental conditions, application rates, and management practices. The manufacturer makes no guarantee of specific results. Seller's liability is limited to replacement of product or refund of purchase price. Manufacturer is not responsible for misuse, mishandling, or application under adverse conditions beyond its control. This product is not registered for pesticidal use with the U.S. Environmental Protection Agency. It is intended as a soil amendment / microbial inoculant only. Keep out of reach of children.