

Vault® NP

Liquid Inoculant for Soybeans



CONTAINS NONPLANT FOOD INGREDIENTS

Guaranteed Analysis

Soil Amending Ingredient:

Active Ingredient

| | |
|---------------------------------------|---------------------------|
| Microorganism | <1.00% |
| <i>Bradyrhizobium japonicum</i> | 3x10 ⁹ cfu/mL* |

| | |
|--|--------|
| Total Other (Inert) Ingredients: | 99.00% |
|--|--------|

| | |
|--------------|---------|
| Total: | 100.00% |
|--------------|---------|

*colony forming units/milliliter

FOR PROFESSIONAL USE ONLY

Keep Out of Reach of Children

This product does not require a hazard warning in accordance with GHS criteria.

(F002177)

Net Contents:

Net Weight:

Guaranteed by:
BASF Corporation
26 Davis Drive, Research Triangle Park, NC 27709

Directions For Use

Commercial Application

The .82 gallon (3.1 liter) size treats 2,500 pounds of seed (based on average seed size of 3,000 seeds per pound). Apply to the seed at 2.1 fl ozs per 50 lbs of seed, 4.2 fl ozs per 100 lbs (CWT) of seed. For soybean seed sold by 140,000 seeds per unit, apply 1.96 fl ozs per 140,000 count unit of seed or 3.92 fl ozs per CWT (based upon average seed size of 2,800 seeds per pound).

The 3.3 gallons (12.5 liters) size treats 10,000 pounds of seed, (based on average seed size of 3,000 seeds per pound). Apply to the seed at 2.1 fl ozs per 50 lbs of seed, 4.2 fl ozs per 100 lbs (CWT) of seed. For soybean seed sold by 140,000 seeds per unit at the rate of 2.1 fl ozs/ 50 lbs of seed or 2.5 fl ozs/60 lbs or 1.96 fl ozs per unit of seed for seed units sold by 140,000 seed count.

Planter Box Application

Shake the product well and apply to the seed at the rate of 2.1 fl ozs / 50 lbs of seed or 2.5 fl ozs / 60 lbs or 1.96 fl ozs per unit of seed for seed units sold by 140,000 seed count.

Bulk Seed Application

1. Remove cap from **Vault® NP** bladder and replace with applicator flow valve. Before inverting the bladder, be sure to position the flow valve in the "off" position.
2. Invert bladder and suspend above treatment area so the end of the hose is just above the seed (for accurate application rates, ensure hose is straight when dispensing inoculant).
3. Adjust the flow valve setting to match output flow rate of seed auger. (See **Vault NP Flow Valve Settings** table)
4. To ensure adequate mixing of seed and inoculant, it is recommended to run auger at 50% capacity.
5. Assess the application rate several times during inoculation to ensure correct target flow rate.

Vault NP Flow Valve Settings

| Flow Valve Setting | Flow Rate fl ozs/min | Approx. Seed/Auger Flow Rate | | |
|--------------------|----------------------|------------------------------|---------------|------------|
| | | lbs/min | Approx. Units | |
| | | | BU/min | 50 lbs/min |
| 1 | 12 | 266 | 5 | 6 |
| 2 | 29 | 690 | 11 | 14 |
| 3 | 45 | 1,071 | 18 | 21 |
| 4 | 56 | 1,333 | 22 | 27 |
| 5 | 60 | 1,428 | 24 | 28 |
| 6 | 68 | 1,619 | 27 | 32 |

Seed Treatment Compatibility

Some seed treatments are harmful to liquid inoculants. Contact your dealer/manufacturer or website for current details. Please observe planting window recommendations for optimal responses.

Inoculated seed (not treated with additional seed treatment and properly treated and stored) must be used within 30 days, or be re-inoculated with fresh product.

In-furrow Application

- The **Vault NP** inoculant concentrate must be diluted with cool, clean, de-chlorinated water and applied as indicated in the following directions.
- Apply diluted inoculant directly on seed within the furrow and cover.
- In-furrow application rates assume a common average seeds-per-acre planting rate (140,000 to 150,000 seeds per acre) across the various row widths. If planting rate is increased significantly, increase the fluid ounces applied per 1,000 linear row feet accordingly. Doing so will decrease the total number of acres treated per case of product.

In-furrow Directions

A. Clean. Ensure that the liquid application machinery is fully flushed of chemical residues before adding inoculant to spray tanks.

B. Configure. Configure the sprayer for in-furrow application. Select and install an appropriate flow regulator (orifice) disk in order to achieve a constant, uninterrupted stream of liquid into the furrow. Carefully adjust the position and flow of the liquid inoculant so that it falls directly onto the seed surface prior to covering in the furrow. Product efficacy may be limited if the inoculant is either applied above, below or to the side of the seed in the furrow.

C. Mix. Prior to use, shake the product well in order to re-suspend any settled out components. **DO NOT** open the unit until required. Pour the complete contents into the spray tank. Dilute in as much water as possible (10 to 20 gallons per acre is recommended). At the 10 gallon of water per acre dilution level, the application rate of inoculant plus water is 70 fl ozs per 1,000 linear feet of row for 30" rows, or 35 fl ozs per 1,000 linear feet of row for 15" rows. For additional guidance regarding specific application details and treatable areas, refer to the **In-furrow Application Table**. Be sure that the inoculant is thoroughly mixed with the water prior to use. To avoid any settling-out of the nitrogen fixing bacteria, ensure that the spray tank volume is frequently agitated during application. The diluted inoculant must be used within 24 hours. **DO NOT** allow the diluted tank mix to exceed 80° F (26° C).

D. Apply at appropriate rate. The application rate per 1,000 linear row feet will vary according to row width. Calibrate application equipment so that the correct amount of inoculant concentrate (1 fl oz per 1,000 linear row feet) is delivered in the diluted mixture. For guidance regarding specific application amounts of inoculant concentrate and treatable areas, see the **In-furrow Application Table**.

In-furrow Application Table

| Vault® NP and Water Volumes: | | |
|--|--------------------------|-----------------------|
| Vault NP | .82 Gallons (3.1 Liters) | |
| De-chlorinated Water | 125 Gal (10 Gal/A) | 250 Gal (20 Gal/A) |
| Application rates per 1,000 linear row feet of final inoculant + water mixture at various row spacings: | | |
| 15" Rows | 35 fl ozs | 70 fl ozs |
| 20" Rows | 47 fl ozs | 94 fl ozs |
| 30" Rows | 70 fl ozs | 140 fl ozs |
| 36" Rows | 82 fl ozs | 165 fl ozs |
| Total Acres Treated | 12.5 | 12.5 |

State Right to Know Description and CAS # / TSNR

Proprietary compound / TSNR 161090809-5100

This product is not recommended as a fertilizer substitute.

Information regarding the contents and levels of metals in this product is available on the internet at <http://www.aapfco.org/metals.htm>.

Storage and Disposal

Storage: Segregate from foods and animal feeds. Keep away from heat. Protect from direct sunlight. Store protected against freezing. Protect from temperatures below: 4° C (40° F). Changes in the properties of the product may occur if substance/product is stored below indicated temperature for extended periods of time. Protect from temperatures above: 25° C (77° F). Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time

Waste Disposal of Substance: Must be disposed of or incinerated in accordance with local regulations.

Container Disposal: Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

Accidental Release Measures: DO NOT discharge into the subsoil/soil. **DO NOT** discharge into drains/surface waters/groundwater. For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr). For large amounts: Dike spillage, Pump off product. Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be labeled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

Storage Precautions: Inoculants are live organisms. For more uniform temperature control, store at floor level. Ensure that inoculant is stored correctly prior to use. Once opened, use the product within 24 hours. **DO NOT** use inoculant that is past its expiration date or that has not been properly stored. Unless otherwise directed, **DO NOT** mix inoculant with fertilizers or pesticides. Under adverse or stress planting conditions (hot, dry field conditions) it is suggested to increase the inoculant application rate.

Conditions of Sale and Warranty

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF CORPORATION ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer. BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S EXCLUSIVE REMEDY AND BASF'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF THE PRODUCT. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, EXEMPLARY, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.** BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of BASF

Vault is a registered trademark of BASF.

Limitations of Use: Any purchaser or user agrees to handle and/or use this product in strict conformity with all limitations of use, including the prohibition of analyzing for content, disassembling, extracting, purifying, or otherwise obtaining any material, for any use whatsoever, from the product in any form. This prohibition specifically includes the growing or culturing of any material for further use of such material (or any progeny thereof) for ANY use whatsoever. User agrees that this product will only be used as instructed on the product label and only for the crop and purpose stated therein.

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20220114.NVA 2022-04-0648-0013
Supersedes: NVA 2020-04-648-0173

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