







Liquid Inoculant for Chickpea

For On-Seed and In-Furrow Application

READ ALL DIRECTIONS BEFORE USING THIS PRODUCT

Minimum Guaranteed Analysis	
ACTIVE INGREDIENTS:	 <1% w/w
1 x 10° CFU/mL <i>Mesorhizobium ciceri</i>	
TOTAL INERT (OTHER) INGREDIENTS: Aqueous Carrier	 >99% w/w

HOW IT WORKS

The active ingredient in LALFIX® Liquid Chickpea is *Mesorhizobium ciceri*. *Mesorhizobium ciceri* is known to nodulate chickpea roots and fix atmospheric nitrogen in a symbiotic relationship with plants. LALFIX® Liquid Chickpea contains two selected strains of *Mesorhizobium ciceri* for balanced performance in different environments.

ON-SEED APPLICATION RATE

 $4.16 \; \text{fl}$ oz per $100 \; \text{lb}$ ($123 \; \text{mL}$ per $45.4 \; \text{kg}$) of seed or $2.5 \; \text{fl}$ oz per bushel. One case treats $10,000 \; \text{lb}$ of seed.

ON-SEED APPLICATION METHOD

- Ensure seed treater has been properly calibrated.
- Shake well to achieve uniform suspension of the product. Bacterial settling is normal.
- Apply 4.16 fl oz (123 mL per 45.4 kg) of seed.
- Protect inoculated seed from direct sunlight or hot drying winds.
- Plant inoculated seed within 48 hours on bare seed for best results. Re-inoculation with fresh product is recommended after 48 hours.
- Over-application could cause lodging or bridging of the seed in the planter box.
- Gently stir seed before planting to permit airflow and to prevent seed clumping.
- Some seed treatments may be harmful to the inoculants. A compatibility test should be conducted prior to use with other seed treatments.
- Do not mix with caustic fertilizers or pesticides.

IN-FURROW APPLICATION RATE

 $15 \, \text{fl}$ oz (443 mL) per acre or 37 fl oz (1,094 mL) per hectare. One case treats 28 acres (11 hectares).

IN-FURROW APPLICATION METHOD

- Ensure the tank and application methods are clean.
- Shake well to achieve uniform suspension of the product. Bacterial settling is normal.
- Apply the inoculant with a minimum of 5 US gallons (20 liters) of clean, non-chlorinated water per acre.
- Calibrate the application equipment for the correct total volume of diluted product.
- Apply product directly on the seed within the furrow.
- Once mixed, use product within 24 hours and keep temperature below 80 °F (26.7 °C).
- Lallemand Plant Care recommends using an on-seed inoculant along with an in-furrow application.
- In-furrow application rate of LALFIX® Liquid Chickpea should be increased if this is the sole form of inoculant or if planting in harsh conditions.
- A compatibility test should be conducted prior to co-application with other products.
- Do not mix with caustic fertilizers or pesticides.

PRECAUTIONS

The active ingredient in LALFIX® Liquid Chickpea are naturally occurring *Mesorhizobium ciceri* cells. Persons allergic to bacteria and immune deficient individuals should avoid using this product. Avoid exposure through inhalation or to open wounds and eyes. Standard protective clothing and equipment including gloves, safety goggles and a NIOSH (The National Institute for Occupational Safety and Health) or MSHA (the Mine Safety and Health Administration) approved respirator are recommended during handling and storage. Use this product in well ventilated areas.

In case of contact with skin or eyes, immediately flush exposed areas with a continuous gentle stream of clean water. In case of inhalation, remove person to fresh air. In case ingestion, do not induce vomiting but rinse mouth with water. Seek medical attention if discomfort or irritation develops. Medical treatment should be based on the judgment of the physician in response to reaction of the patient.



ACCIDENTAL RELEASE

Spilled liquid may be slippery. Flush spill area with adequate water to wash away slippery residues. In case of large spill, shut off release if safe to do so. Contain spill and clean up the material for disposal.

STORAGE & HANDLING RECOMMENDATIONS

The active ingredients in LALFIX® Liquid Chickpea are living microorganism and require specific storage conditions to ensure viability and product performance.

- Do not store product in areas where freezing will occur or where temperature will exceed 72°F/22°C.
- Use product before expiration date stated on the package. The expiration date is valid only for unopened bags stored under cool conditions (<72 °F/22 °C).
- Open package only when ready to use. Once open, use the entire package.
- Do not store opened bags of LALFIX® Liquid Chickpea.
- Unused product should be disposed of in accordance with applicable federal, provincial or state, and municipal laws and regulatory guidelines.

LIMITED WARRANTY

Danstar Ferment AG/LALLEMAND PLANT CARE ("Danstar") warrants only that this product conforms to the product description on this label and is reasonably fit for the purposes set forth in the Directions for Use when used in accordance with them. However, ineffectiveness or other unintended consequences may result because of such factors as the use, storage or handling of the product contrary to the label instructions, all of which are beyond the control of Danstar. To the extent consistent with applicable law, Danstar shall not be liable for indirect or consequential damages resulting from the use, storage or handling of this product. DANSTAR MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

Not a plant food product. Not recommended for use as a fertilizer substitute.

Batch No.: see printing on the box Expiry Date: see printing on the box

Guaranteed by:

Danstar Ferment AG/LALLEMAND PLANT CARE Poststrasse 30 CH-6300 Zug, Switzerland

Marketed by and distributed by:

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