

Limus®

Nitrogen Management

A nitrogen management product that is applied with urea containing fertilizers, such as urea-ammonium nitrate (UAN) fertilizer or urea fertilizer, to minimize nitrogen losses by reducing ammonia volatilization

CONTAINS NONPLANT FOOD INGREDIENTS

Active Ingredient:

16.88%N-(n-butyl) thiophosphoric triamide [NBPT] (CAS No: 94317-64-3)
5.63%N-(n-propyl) thiophosphoric triamide [NPPT] (CAS No: 916809-14-8)
77.49% Total Other Inert Ingredients: (colorant, fragrance, solvent)
100.00% Total

Total NBPT and NPPT is manufactured to 22.5-25% by weight active ingredient solution.
Density = 9.055 pounds per gallon (1.085 grams per cubic centimeter) at 68°F

FOR PROFESSIONAL USE ONLY

Keep Out of Reach of Children

GHS Signal Word: DANGER

Hazard Statement: Combustible liquid. Causes serious eye damage. Harmful if inhaled. Harmful if swallowed. May cause allergic skin reaction. Suspected of damaging fertility. Harmful to aquatic life. Harmful to aquatic life with long lasting effects.



Precautionary Statements (Prevention): Wear protective gloves/protective clothing/eye protection/face protection. Use outdoors or in a well-ventilated area. Do not breathe mist or vapor. Avoid breathing mist. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Avoid release into the environment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Contaminated clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response): Immediately call a POISON CENTER or doctor/physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF ON SKIN (or hair): Wash with plenty of soap and water. Rinse mouth. Take off contaminated clothing before reuse. In case of fire: Use water spray, dry powder, foam or carbon dioxide for extinction.

Precautionary Statements (Storage): Store locked up. Store in a well-ventilated place. Keep cool.

Precautionary Statements (Disposal): Dispose of contents/container to hazardous or special waste collection point.

Net Contents:

BASF Corporation
26 Davis Drive, Research Triangle Park, NC 27709

Directions For Use

Limus[®] is suitable for use with all nitrogen consuming crops. This product is combined with urea containing fertilizers before application to the soil. **Limus** treatment is recommended for all applications of urea containing fertilizers and can be used at any fertilizer timing.

Limus is not a fertilizer substitute and is not recommended for feed application. Urea may be toxic to livestock when ingested.

Quick Rate Reference Chart

Fertilizer	Application Rates per Ton of Fertilizer
Urea	2-3 quarts per 2,000 lbs
UAN	1-1.5 quarts per 2,000 lbs
Other	10 fl oz per 100 lbs urea-N

Application Instructions for use with UAN

1. Wear proper personal protection including eye protection and chemical-resistant gloves.
2. Use only under adequate ventilation with large volumes of air movement. If ventilation is inadequate, respiratory protection is required.
3. Fill spray tank with half the desired amount of UAN.
4. Measure the desired quantity of **Limus**.
5. Add the **Limus** and mix thoroughly. Once it is well mixed, other products can be added.
6. Continue mixing while adding the remaining UAN.

Application Rate

1-1.5 quarts of **Limus** per 2,000 pounds of UAN (0.95-1.42 liters per 907 kilograms of UAN)

Rate recommendations are based on average conditions. The higher end of the rate range is recommended when multiple conditions favoring ammonia volatilization (high temperature, high humidity, soil pH >7.0, moist soil, crop residues) are present or when a lengthened interval is expected before an incorporation event, such as irrigation or >0.5 inch rainfall.

Restrictions and Limitations

Limus treated UAN has demonstrated good compatibility with most pesticides and adjuvants. However, not every potential combination has been tested. Glyphosate containing herbicides may increase the rate of **Limus** degradation in a UAN tank mix. It is recommended that all tank mixes be applied to the soil soon after blending.

Limus Treated UAN Storage

Use **Limus** treated UAN immediately after mixing. The dye contained in this formulation will separate without constant agitation and may stain equipment.

Application Instructions for use with Urea

1. Wear proper personal protection including eye protection and chemical-resistant gloves.
2. Use only under adequate ventilation with large volumes of air movement. If ventilation is inadequate, respiratory protection is required.
3. Weigh the urea and transfer into the mixing or blending equipment.
4. Measure the desired quantity of **Limus**.
5. Apply the **Limus** to the urea in the blender. Blend until the **Limus** is uniformly distributed onto urea. Add other fertilizer materials only after **Limus** coverage is achieved.
6. Under conditions of high temperature and high humidity, particles may become sticky. Addition of other fertilizer materials, such as potash or fine clay powders, may reduce bridging.

Application Rate

2-3 quarts of **Limus** per 2,000 pounds of urea (1.90-2.84 liters per 907 kilograms of urea)

Rate recommendations are based on average conditions. The higher end of the rate range is recommended when multiple conditions favoring ammonia volatilization (high temperature, high humidity, soil pH >7.0, moist soil, crop residues) are present or when a lengthened interval is expected before an incorporation event, such as irrigation or >0.5 inch rainfall.

Limus Treated Urea Storage

Treated urea can be stored at least 4 months at 70°F without significant degradation.

Application Instructions for other Urea Fertilizers

Other urea fertilizers include, but are not limited to: soluble urea, methylene urea and manure.

Application Rate

10 fl oz of **Limus** per 100 lbs urea-N based on analysis (296 mL per 45.4 Kg urea-N)

Application Instructions for Direct Soil Applications

Limus can reduce ammonia volatilization of urea containing fertilizer when **Limus** is applied directly to the soil surface between 2 days before and 2 days after the fertilizer application. Apply **Limus** with at least 20 gallons of water per acre to the soil surface.

Storage and Disposal

Prohibitions: Do not contaminate feed, food, or water. Do not release into soil, subsoil, drains, surface water, or groundwater.

Product and Container Disposal: Dispose of container and unused contents in accordance with federal, state, and local regulations for hazardous, liquid wastes.

Accidental Release Measures: For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, diatomaceous earth). For large amounts: Dike spillage. Pump off. 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. Cleaning operations should only be carried out while wearing breathing apparatus.

Storage: Store this product in tightly closed original container in a well-ventilated place. Avoid contact with water and store at temperatures between 14° and 100°Fahrenheit (-10° and 38°Celsius). Long exposures to temperatures below 14°F (-10°C) will cause the product to freeze and require thawing before use. Avoid high temperatures. Long term storage at temperatures above 100°F (36°C) may cause the product to degrade.

State Right to Know Description and CAS # / TSRN

Benzyl alcohol / 100-51-6; Proprietary polymers / TSRN 161090809-5125; thiophosphoric compound / TSRN 161090809-6898; Carboxylic acid alkyl amide / TSRN 161090809-6900; thiophosphoric compound / TSRN 161090809-6899

**EMERGENCY CONTACT: CHEMTREC 1-800-424-9300
BASF Corporation 1-800-832-HELP (4357)**

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. 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.

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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.

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 **BASF**
We create chemistry