



NITRAIN™

NITROGEN STABILIZER

Contains: NBPT (N-(n-butyl)-thiophosphoric triamide)
N-methyl-2-pyrrolidone

KEEP OUT OF REACH OF CHILDREN



DANGER

Causes skin irritation. Causes serious eye damage. May cause respiratory irritation. May damage fertility. May damage the unborn child. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing gas/mist/vapors/spray.

NITRAIN™ nitrogen stabilizer is a fertilizer additive for Urea and Urea Ammonium Nitrate (UAN) fertilizers that reduces volatility by inhibiting the activity of the urease enzyme. Not recommended for use as a fertilizer substitute.

DIRECTIONS FOR USE

WARNING: Read the entire label before use. Use only according to label directions. Before buying or using this product, read the "Warranty Disclaimer" and "Inherent Risks of Use and Limitations of Liability" at the end of the label. If terms are unacceptable, return at once unopened to place of purchase. Always wear proper personal protection (recommend long sleeves and long pants, goggles, and ANSELL EDMONT NEOX Neoprene gloves Number 9-912 or equivalent when handling the product.) Use only with adequate ventilation (large volumes of air movement). If organic vapors or dusts are present above their regulatory limits, follow a respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/ state, provincial or local requirements whenever workplace conditions warrant respirator use.

GENERAL USE PRECAUTIONS

Observe all precautions on label and read safety data sheet before use. Not recommended for feed application. Do not apply directly to water. Do not contaminate waterways and sewers during cleaning of equipment or disposal of wastes. Always adhere to applicable provisions of federal, state, provincial, and local laws and regulations. Do not enter treated areas until spray has thoroughly dried. Keep livestock off treated areas until after 1 inch of rainfall has accumulated. Urea, which is a component in UAN, may be toxic to livestock when ingested.

APPLICATION RATES

NITRAIN nitrogen stabilizer is urea specific and may be used for any nitrogen consuming plants including row crops, specialty crops, pastures, sod farms, turfgrass, ornamentals and other landscape and nursery plantings. This product is recommended for surface application of urea and urea containing fertilizers such as pre-plant, preemergence, sidedress, top-dress, broadcast or other post-planting applications. The benefits of NITRAIN stabilizer as a urease inhibitor are a result of its ability to retard the hydrolysis of urea and control volatility, preventing ammonia loss while the urea is on the soil surface.

Many factors in the environment contribute to volatilization. The factors increasing volatilization that should be considered when choosing the appropriate rate include:

1. High soil moisture
2. Drying conditions including low humidity, sun and wind
3. High air and soil temperatures
4. High pH soils
5. Low organic matter and lower CEC soils
6. High amounts of crop residue
7. Length of control needed

NITRAIN NITROGEN STABILIZER USE RATE CHART

26.7% by weight active ingredient solution.

Urea	3.0 Quarts/Ton
UAN	1.5 Quarts/Ton

When conditions favoring volatility exist, or when longer control is needed, the rate may be increased by 1 qt/ton.

FOR BLENDING ON UREA

Equipment Required

- An accurate scale to weigh materials.
- A fertilizer blender or other equipment suitable for rolling or blending the urea particles with NITRAIN stabilizer. A rotary device that can tumble the urea and allow for uniform contact with the product without spillage is appropriate. Auger and paddle mixers may also be used. Exposed inner surfaces should be clean, dry and rust-free.

Procedure

1. Wear proper personal protection which is long sleeves and long pants, goggles, and ANSELL EDMONT NEOX Neoprene gloves Number 9-912 or equivalent.
2. Use only with adequate ventilation with large volumes of air movement. If used with inadequate ventilation respiratory protection is required.
3. Weigh the urea and transfer into the mixing or blending equipment.
4. Measure the desired quantity of NITRAIN stabilizer.
5. Apply the product to the urea in the blender. Blend well before introducing other fertilizer materials and allowing adequate time for uniform coverage. A dye is included in the product to assist in evaluating the uniformity of coverage.
6. Under certain temperature and humidity conditions urea blended with the product may stick together. Often the addition of other fertilizer materials to the blender, such as potash, will eliminate the need to add a drying agent. If the particles remain sticky, add small amounts of finely ground, highly absorbent, free-flowing powders such as attapulgite clays at concentrations as low as 0.25% by weight of the treated urea.

Storage after blending:

Granular dry urea treated with NITRAIN stabilizer is suitable for long-term storage in sealed plastic bags. Research shows stabilized fertilizer packaged in sealed plastic bags may be stored 9 months between 66° and 77°F.

FOR MIXING WITH UREA-AMMONIUM NITRATE (UAN) SOLUTIONS

Procedure

1. Wear proper personal protection which is long sleeves and long pants, goggles, and ANSELL EDMONT NEOX Neoprene gloves Number 9-912 or equivalent.
2. Use only with adequate ventilation with large volumes of air movement. If used with inadequate ventilation respiratory protection is required.
3. Fill the spray tank half full with UAN solution.
4. Add the product to the UAN solution and mix thoroughly by agitation prior to adding pesticides or surfactants.
5. With agitators on, add the appropriate amount of NITRAIN nitrogen stabilizer for the desired concentration in the full volume.
6. Mix well and then add the remainder of the UAN solution.
7. Use blended UAN solution soon after mixing. If necessary, UAN treated with this product may be stored up to 10 weeks.

Compatibility

Some testing has been conducted to assess the stability and compatibility of NITRAIN nitrogen stabilizer with certain herbicides and adjuvants. Test results show that the rate of the degradation should not preclude the use of this product with most commonly used agricultural herbicides under normal use. Most agricultural chemicals compatible with UAN solutions are also compatible with this product. However, compatibility tests prior to use are recommended. Glyphosate herbicides may cause an increase in the rate of degradation when tank mixed with NITRAIN nitrogen stabilizer. Therefore such mix should be applied soon after mixing to avoid a possible reduction in the effectiveness of the active ingredient.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565.

FIRST AID

If in eyes: Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice. **If on skin:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice. **If swallowed:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person. **If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment.

HANDLING AND STORAGE

Handling

Avoid exposure - obtain special instructions before use. Wear appropriate personal protective equipment. Avoid generation and spreading of dust. Avoid breathing gas/mist/vapors/spray. Wear eye and face protection. Avoid prolonged exposure. Handle and open container with care. Wash before eating, drinking and/or smoking.

Storage

Avoid exposure - obtain special instructions before use. Use care in handling/storage. Store this product in tightly closed original container in a well-ventilated place and in accordance with local/regional/ national/international regulations. Keep away from food, drink and animal foodstuffs.

Avoid freezing. Store at temperatures between 32 - 100°F (0 - 38°C) and avoid contact with water. If the product is subjected to temperatures below 32° F (0°C) for an extended period of time, it will become gel-like and the formation of crystals will result in the bottom of the container. If this occurs, move product to a warm location where the inside temperature of the product can be brought above 58° F (14°C). At this point the product will return to its normal liquid state. Following these procedures the product may be used normally. No degradation of active ingredient will occur with the product that has been frozen.

Avoid high temperatures. Long term storage at temperatures above 100°F (36°C), and long term storage of open containers, will cause the product to degrade. As the product degrades, it can release harmful gases. Store below 100°F (36°C) and use opened containers within 30 days. Always use oldest stock first.

Dispose according to federal, state, provincial, and local regulations. Dispose of containers after rinsing. Cold temperatures, hard water, or less than adequate amounts of water in rinsing may result in the formation of crystals. Offer empty containers for (i) recycling, (ii) reconditioning, or (iii) dispose in a landfill or by other procedures approved by relevant authorities.

For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC 1-800-424-9300.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

BEFORE BUYING OR USING THIS PRODUCT, read the Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary. LOVELAND PRODUCTS, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, when the product is used in accordance with such Directions for Use under normal conditions of use. LOVELAND PRODUCTS, INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE BUYER'S OR USER'S EXCLUSIVE REMEDY FOR ANY INJURY, LOSS, OR DAMAGE RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT SHALL BE LIMITED TO ONE OF THE FOLLOWING, AT THE ELECTION OF LOVELAND PRODUCTS, INC. OR THE SELLER: DIRECT DAMAGES NOT EXCEEDING THE PURCHASE PRICE OF THE PRODUCT OR REPLACEMENT OF THE PRODUCT. LOVELAND PRODUCTS, INC. AND THE SELLER SHALL NOT BE LIABLE TO THE BUYER OR USER OF THIS PRODUCT FOR ANY CONSEQUENTIAL, SPECIAL, OR INDIRECT DAMAGES, OR DAMAGES IN THE NATURE OF A PENALTY.

WARNING: This product contains chemicals known to the State of California to cause cancer or birth defects or other reproductive harm.

Tests have not been carried out under all possible use conditions and Seller cannot and does not represent or warrant that the goods are compatible with all other chemicals or under all use conditions.

Information regarding the contents and levels of metals in this product is available on the Internet at <http://www.regulatory-info-lpi.com>

Nitrain is a trademark of Loveland Products, Inc.

HMIS® Ratings	
Health	2*
Flammability	1
Physical Hazard	0
Personal Protection	X



Density: 8.93 lbs/gallon @ 68° F
Net Contents: 260 gallons (984 liters)
Net Weight: 2,321.80 lbs (1,050 kg)
Product Code: 1000520947