

N-EDGE® 2

N-Edge 2 nitrogen stabilizer is a fertilizer additive for Urea and Urea Ammonium Nitrate (UAN) fertilizers that reduces volatilization by inhibiting the activity of the urease enzyme.

NITROGEN STABILIZER

2.5 gallon
(9.46 liters)



NET WT. 9.26 LBS PER GALLON

WARNING

HAZARD STATEMENTS

Causes skin irritation. Causes serious eye damage. May damage fertility or the unborn child. May cause respiratory irritation.

PRECAUTIONARY STATEMENTS

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.

FIRST AID

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

IF INHALED: Move person to fresh air. If the affected person is not breathing, apply artificial respiration. Get medical attention immediately.

IF SKIN CONTACT: Immediately flush skin with plenty of water. Get medical attention if irritation develops and persists.

IF EXPOSED OR CONCERNED: Get medical advice/ attention.
Supplemental label information: Restricted to professional users.

FOR CHEMICAL EMERGENCY:

Call CHEMTREC day or night. USA/Canada - 1.800.424.9300 Outside USA/Canada - 1.703.527.3887

Manufactured for CHS Inc.
5500 Cenex Drive
Inver Grove Heights, MN 55077

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 material safety data sheet before use. There are no reentry restrictions unless used with pesticides or fertilizer materials that may have such requirements. 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.

RECOMMENDED APPLICATION RATES

N-Edge® 2 nitrogen stabilizer may be used for any nitrogen consuming crops including row crops, specialty crops, vegetables, fruit, tree crops, sod, turfgrass, forestry, forage, ornamentals and other crops needing nitrogen fertilizer. This product is recommended for surface application of urea and urea containing fertilizers such as pre-plant, pre-emergence, side-dress, top-dress or other post-planting applications. The benefits of N-Edge 2 nitrogen stabilizer as a urease inhibitor are a result of its ability to retard the hydrolysis of urea and control volatilization, preventing ammonia loss while the urea is on the soil surface.

Many factors in the environment contribute to volatilization, such as:

1. Higher soil moisture
2. Drying conditions including low humidity, sun and wind
3. Higher air and soil temperatures
4. Higher pH soils have a higher potential for volatility
5. Lower organic matter and lower CEC soils
6. Higher amounts of crop residue which have higher amounts of urease
7. Length of control needed

N-EDGE 2 NITROGEN STABILIZER RECOMMENDED USE RATE

UREA	2 qt/ton	UAN	1 qt/ton
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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 N-Edge 2 nitrogen 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 (long sleeves and long pants, goggles, and ANSELL EDMONT NEOX Neoprene gloves Number 9-912 or equivalent are recommended).
2. Use only with adequate ventilation (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 N-Edge 2 nitrogen stabilizer.
5. Apply the stabilizer to the urea in the blender. N-Edge 2 nitrogen stabilizer should be blended with the urea before introducing other fertilizer materials.
6. Blend the urea allowing adequate time for uniform coverage. A green dye is included in the stabilizer to assist in evaluating the uniformity of coverage.

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.

FOR MIXING WITH UREA-AMMONIUM NITRATE (UAN) SOLUTIONS:

Procedure

1. Wear proper personal protection (long sleeves and long pants, goggles, and ANSELL EDMONT NEOX Neoprene gloves Number 9-912 or equivalent are recommended).
2. This product should be introduced to the UAN solution and mixed thoroughly by agitation prior to adding pesticides or surfactants.
3. Use only with adequate ventilation (large volumes of air movement). If used with inadequate ventilation respiratory protection is required.
4. Fill the spray tank half full with UAN solution.
5. With agitators on, add the appropriate amount of N-Edge 2 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 N-Edge 2 nitrogen stabilizer may be stored up to 10 weeks.

Compatibility

Some testing has been conducted to assess the stability and compatibility of N-Edge 2 nitrogen stabilizer with certain herbicides and adjuvants. Test results show that the rate of the degradation should not preclude the use of this stabilizer 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 N-Edge 2 nitrogen stabilizer. Therefore such mix should be applied soon after mixing to avoid a possible reduction in the effectiveness of the active ingredient.

Handling and Storage

Handling: Avoid exposure – obtain special instructions before use. Wear appropriate personal protective equipment. Avoid generation and spreading of dust. Avoid inhalation of dust and contact with eyes. Avoid prolonged exposure. Handle and open container with care. Wash before eating, drinking and/or smoking.

Storage & Disposal: 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. Store locked up and in a well-ventilated place. Keep container tightly closed. Keep out of reach of children. Store at temperatures between 32 and 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.

Long term storage at temperatures above 100 °F (38 °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 (38 °C) and use opened containers within 30 days. Always use oldest stock first.

Dispose of contents/container in accordance with local/regional/national/international regulations. Dispose of containers by triple rinsing. (Cold temperatures, hard water, or less than adequate amounts of water in rinsing may result in the formation of crystals. When rinsing containers, a minimum of 16 ounces of water per 2.5 gallon container should be utilized to avoid precipitation of the active ingredient and subsequent solids formation, which can clog injector lines.) Then offer for recycling or reconditioning, or puncture and dispose in a landfill or by other procedures approved by local and state authorities.

TERMS AND CONDITIONS OF USE

IF THE TERMS OF THE FOLLOWING WARRANTY DISCLAIMER AND INHERENT RISKS OF USE AND LIMITATION OF LIABILITY ARE NOT ACCEPTABLE, RETURN UNOPENED PACKAGE IMMEDIATELY TO PLACE OF PURCHASE FOR A REFUND OF THE PURCHASE PRICE PAID. OTHERWISE, USE BY THE BUYER OF THIS PRODUCT OR ANY OTHER USER CONSTITUTES ACCEPTANCE OF THE TERMS UNDER WARRANTY DISCLAIMER AND INHERENT RISKS OF USE AND LIMITATION OF LIABILITY.

GUARANTEED ANALYSIS

Active Ingredient:

N-(n-butyl) thiophosphoric triamide (NBPT)
CAS No. 94317-64-3).....40.4%

Inert Ingredients:.....59.6%

(Dimethyl sulfoxide [DMSO] CAS No. 67-68-5, Benzaldehyde
CAS No.100-52-7, 1,2,3-propanetriol CAS No.56-81-5

WARRANTY DISCLAIMER

AS ITS EXCLUSIVE WARRANTY, SELLER WARRANTS THAT THIS PRODUCT CONFORMS TO THE CHEMICAL DESCRIPTION ON THE LABEL AND IS REASONABLY FIT FOR THE PURPOSES EXPRESSLY STATED ON THE LABEL WHEN USED IN STRICT ACCORDANCE WITH THE DIRECTIONS, SUBJECT TO THE INHERENT RISKS SET FORTH BELOW. SELLER MAKES NO GUARANTEE THAT USE OF THIS PRODUCT WILL YIELD ANY SPECIFIC RESULTS. TO THE EXTENT PERMITTED BY APPLICABLE LAW, SELLER HEREBY DISCLAIMS AND DOES NOT MAKE ANY OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

INHERENT RISKS OF USE/LIMITAION OF LIABILITY/LIMITATION OF REMEDIES

IT IS IMPOSSIBLE TO ELIMINATE ALL RISKS ASSOCIATED WITH USE OF THIS PRODUCT. CROP DAMAGE OR PERSONAL INJURY, LACK OF PERFORMANCE, OR OTHER UNINTENDED CONSEQUENCES MAY RESULT BECAUSE OF SUCH FACTORS AS USE OF PRODUCT CONTRARY TO LABEL INSTRUCTIONS (INCLUDING CONDITIONS NOTED ON THE LABEL, UNFAVORABLE TEMPERATURES, SOIL CONDITIONS ETC.), ABNORMAL CONDITIONS (SUCH AS EXCESS RAINFALL, DROUGHT, TORNADOES, HURRICANES), PRESENCE OF OTHER MATERIALS, THE MANNER OF APPLICATION, OR OTHER FACTORS, ALL OF WHICH ARE BEYOND THE CONTROL OF SELLER. ALL SUCH RISKS ARE EXPRESSLY ASSUMED BY THE BUYER OF THIS PRODUCT. THE EXCLUSIVE REMEDY FOR LOSSES OR DAMAGES RESULTING FROM THIS PRODUCT (INCLUDING CLAIMS BASED ON CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR OTHER LEGAL THEORIES), SHALL BE LIMITED TO, AT GROWMARK'S ELECTION, ONE OF THE FOLLOWING:
1) REFUND OF PURCHASE PRICE PAID BY BUYER OR,
2) REPLACEMENT OF AMOUNT OF PRODUCT USED

SELLER SHALL NOT BE LIABLE FOR LOSSES OR DAMAGES RESULTING FROM HANDLING OR USE OF THIS PRODUCT UNLESS SELLER IS PROMPTLY NOTIFIED OF SUCH LOSS OR DAMAGE IN WRITING. IN NO CASE SHALL SELLER BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, SPECIAL OR EXEMPLARY DAMAGES OR LOSSES. THE TERMS OF THE WARRANTY DISCLAIMER ABOVE AND THIS INHERENT RISKS OF USE AND LIMITATION OF LIABILITY CANNOT BE VARIED BY ANY WRITTEN OR VERBAL STATEMENTS OR AGREEMENTS. NO EMPLOYEE, DISTRIBUTOR OR SALES AGENT OF SELLER OR USER IS AUTHORIZED TO VARY OR EXCEED THE TERMS OF THE WARRANTY DISCLAIMER OR THIS INHERENT RISKS OF USE AND LIMITATION OF LIABILITY IN ANY MANNER.

FIRE FIGHTING

Suitable extinguishing media: Water fog. Water spray. Carbon dioxide (CO2). Foam. Extinguishing media which must not be used for safety reasons: Do not use water jet as an extinguisher, as this will spread the fire. Dispose of containers according to federal, state, and local regulations.

HMIS ratings

Health: 1* *Chronic Hazard
Flammability: 0
Physical hazard: 0

Read the material safety data sheet before using this product.

Keep Out of the Reach of Children

WARNING

Causes eye irritation. May cause skin and respiratory tract irritation. Possible reproductive hazard – contains material that may cause adverse reproductive effects.

First Aid Measures

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin contact: Immediately flush skin with plenty of water. Get medical attention if irritation develops and persists.
Inhalation: Move person to fresh air. If the affected person is not breathing, apply artificial respiration. Get medical attention immediately.
Ingestion: Rinse mouth thoroughly. Drink 1 or 2 glasses of water. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical attention.