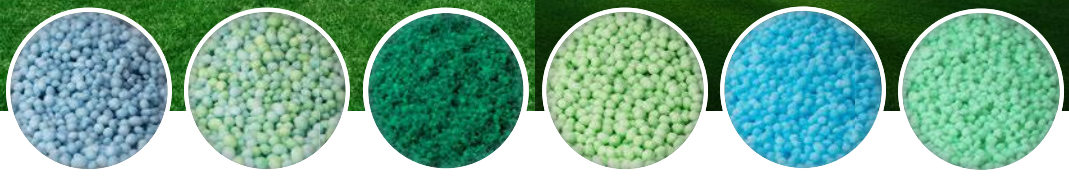
ALLIED NUTRIENTS™

Growing a Greener World, Together

Enhanced Efficiency Fertilizers

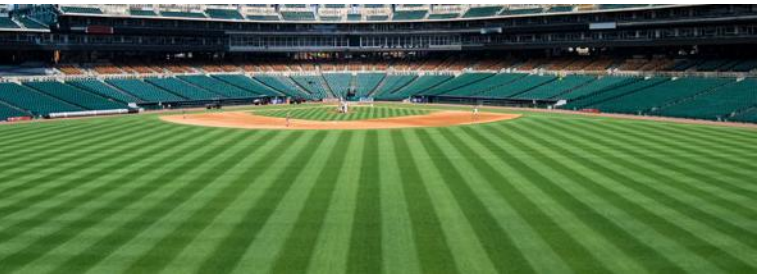
EEF Product Portfolio

Controlled-Release • Slow-Release • Stabilized Nitrogen



Industry Leading Performance

Allied Nutrients specializes in providing the industry's leading Enhanced Efficiency Fertilizers (EEFs) that deliver sustainable, high-performing solutions for outstanding turf and ornamental health.



Product Catalog

CONTENTS

EFFECTIVE. EFFICIENT. PROVEN.

Allied Nutrients™ is committed to providing only the industry's leading Efficient, Effective and PROVEN enhanced efficiency fertilizer technologies. Allied's portfolio is not only filled with the foremost in proven quality but also the largest and most diverse in flexibility - regarding SGNs and longevities. Allied's technologies have been specifically developed to solve the unique challenges of green industry professionals and have been tried, trusted and PROVEN to provide optimal nutrient uptake, dependable extended feeding and exceptional turf and ornamental appearance and health.

Allied Nutrients' enhanced efficiency fertilizer (EEF) products can also reduce operating costs, free up labor, increase the return on time and nutrient investment (ROI) and protect the environment by reducing the potential for nutrient leaching, denitrification, runoff and volatilization.

TRU PCU™

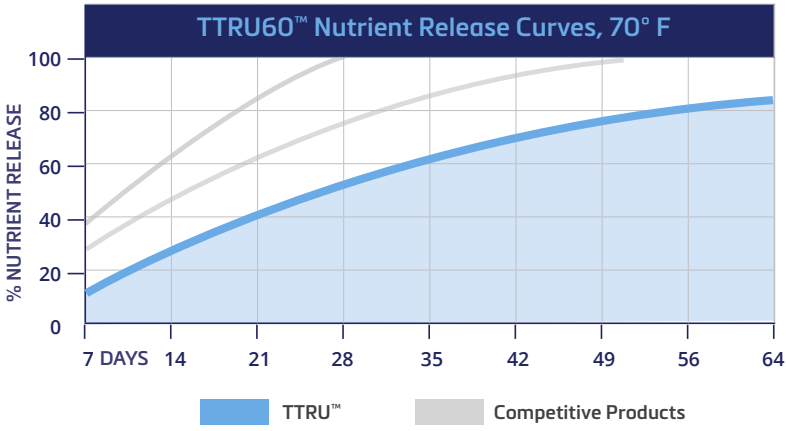
TRUSTED TIME-RELEASE UREA

CONTROLLED-RELEASE NITROGEN TECHNOLOGY

60, 90, 120 & 180 Day Extended Release

High Performing, Precise & Durable with Flexible Longevities

TTRU™ Trusted Time-Release Urea is a controlled-release fertilizer developed with a PROVEN enhanced efficiency technology, innovatively engineered with a precise and durable coating for outstanding and reliable performance. Developed for the commercial and residential lawn care, golf and sports turf industries.



TTRU™ Advanced Polymer-Coating Technology

Low-dust granule
excellent flowability and non-clogging

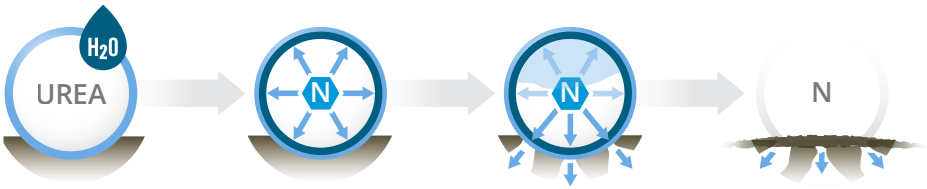
SGN options
- Regular

Thickness of coating determines longevity from 60 to 180* days per application

PROVEN Polymer coating for reliable nitrogen (N) release

Durable coating to maintain consistent nutrient release, durability during transport, blending, application - resulting in performance you can TTRUST

How It Works



After application, soil moisture moves through polymer and into the encased fertilizer.

Nutrients begin to dissolve resulting in a concentrated nutrient solution inside the polymer membrane.

Nutrients move across polymer coat by diffusion, from high concentration to low concentration (soil solution). Temperature and polymer thickness control rate of release.

Plants take up nutrients, driving further release until particle is empty.

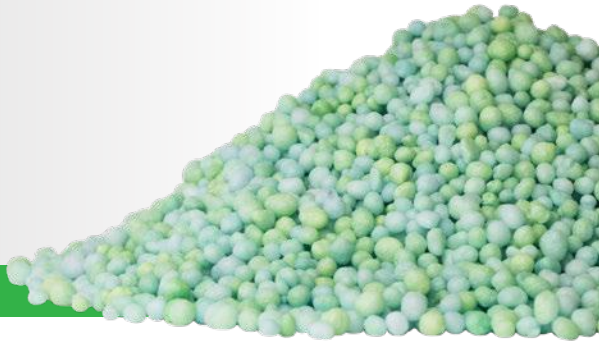
Key Benefits

- **Proven -** Controlled-release technology that provides a reliable and gradual release of nitrogen for extended nutrition and consistent, vibrant and healthy turf
- **Durable -** Stays intact during transportation, blending and application to maintain consistent release of nutrition and more efficient release of nitrogen in the first 7 days
- **Precise, metered, nutrition -** Reduced likelihood of feast/famine cycles, growth flushes and burn. Strengthens turf against weed and disease pressures
- **Sustainable -** Greatly reduces the potential for nutrient leaching, denitrification, runoff or volatilization
- **Economical -** Maximizes ROI on labor and operating cost. Is less costly per day to maintain healthy turf
- **Flexible -** Longevities available in 60,90, 120, 180 day

Industries developed for:
Commercial and Residential Lawn Care, Golf and Sports Turf

XCU®

Slow-Release Fertilizer



SLOW-RELEASE NITROGEN TECHNOLOGY

Up to 10 Weeks of Available Nutrition

Dependable & Steady Extended Nitrogen Release

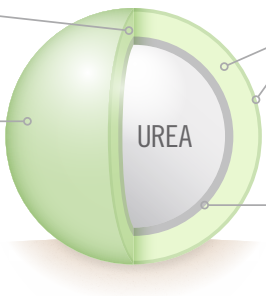
XCU® slow-release fertilizer provides gradual, steady nutritional uptake for up to 10 weeks of plant response. XCU® fertilizer has a high nitrogen (N) content (43%) with the addition of sulfur (4%), which provides added nutrition to the plant and can amend the soil. The value is more area can be covered per application using less fertilizer, which is more efficient and economical. Also, with less N lock-off more of the applied N is taken up and utilized by turfgrass or plants in the expected time frame.

Advanced Dual-Coating Technology

Less sulfur coating reduces N lock-off and delivers more N

Coating integrity is maintained during transport, blending, bagging and application

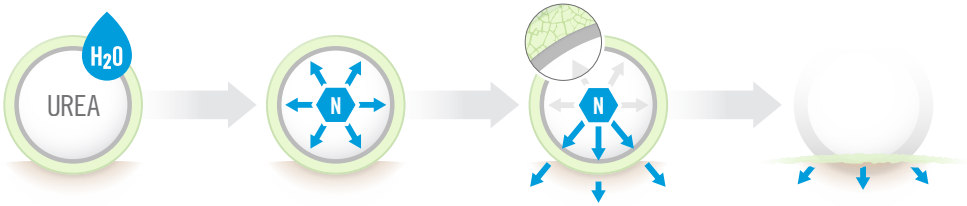
SGN options
- Mini
- Regular



Outer layers consist of a thin coating of elemental sulfur and polymer wax, which work together to protect the inner polymer coating

Inner layer consists of a thin, cross-linked polymer film that encapsulates and protects the urea granule

How It Works



Soil moisture penetrates the sulfur and polymer coatings.

Nitrogen begins to dissolve creating pressure within the granule.

With previous-technology SCUs, this pressure cracked the coating, immediately releasing N (catastrophic release). The inner polymer coating of XCU® fertilizer results in a hybrid of diffusion-based release and catastrophic release, resulting in a more consistent release profile.

After N release, the sulfur eventually breaks down into the soil where it may be taken up by the plant.

Key Benefits

XCU® slow-release fertilizer has been widely used by superintendents, LCOs, municipal turf managers and professional landscapers to economically and efficiently promote a plant response of health, growth and color for up to 10 weeks per application.

- **Unique polymer and sulfur coating technology -** provides gradual, consistent and cost-effective slow-release nitrogen
- **Dual-coated technology** - provides up to 10 weeks of plant response
- **Contains sulfur** - which offers additional nutrition to the plant and can amend the soil
- Increased percentage of XCU® fertilizer in blends delivers increased value and improved nutrient uptake
- Fewer applications can reduce overall fertilizer expense, fuel costs and equipment upkeep; allows for optimization of labor
- **Highly flowable -** for ease of handling and consistent application
- **Environmentally responsible -** with low potential for nutrient leaching, denitrification, runoff or volatilization

Industries: Lawn & Landscape, Golf, Sports Turf

Options

XCU® fertilizer is available in sizes to fit a number of fertilization programs.

Granule options at actual size	Mini	Regular
ANALYSIS	**41-0-0**	**43-0-0**
SGN	120-180	220-270
Nitrogen	41%	43%
Sulfur	7%	4%

Flexibility

Only a portion of the N applied as conventional fertilizer is taken up by plants, but enhanced efficiency fertilizers (EEFs) increase N uptake. Increasing the XCU® fertilizer content in blends results in more efficient N use; the more XCU® fertilizer used, the better your blends work.

Fertilizer Blend	lb. N taken up from 1 lb. N application	% increase vs. 100% urea
100% urea	0.36	n/a
75% urea / 25% XCU®	0.42	17
50% urea / 50% XCU®	0.48	34
25% urea / 75% XCU®	0.54	51
100% XCU®	0.61	69

Above data from University of Florida and Pennsylvania State University.

Nitroform®
Slow-Release Fertilizer

SLOW-RELEASE NITROGEN TECHNOLOGY

Up to 22 Weeks of Available Nutrition

Reliable & Long Lasting Nitrogen Release

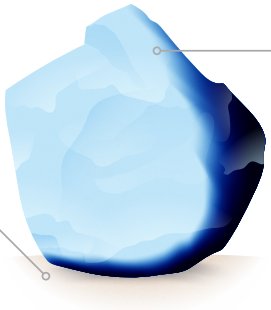
NITROFORM® urea-formaldehyde (UF) fertilizer delivers a steady, balanced and dependable source of nitrogen (N) for up to 22 weeks or more. For more than 50 years, turf and ornamental professionals have relied on NITROFORM® fertilizer, due to its exclusive release properties that make it one of the safest and longest-lasting slow-release sources of N available. NITROFORM® fertilizer granules can be broadcast, or the powder can be suspended in water, spray-applied or root-zone injected for trees and shrubs.

Urea-Formaldehyde Technology

Non-burning, low-salt index formulation

Safe and long-lasting

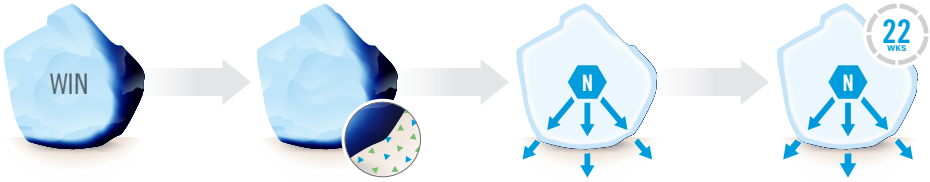
Unique mode of release for strong, rapid root development



Supplies both N and energy-rich carbon to help increase and sustain populations of beneficial microorganisms in the soil

SGN options
- Micro
- Mini
- Regular

How It Works



With over two-thirds of its formulation as water insoluble nitrogen (WIN), NITROFORM® fertilizer feeds through natural processes by microbial breakdown.

Microbes gradually convert UF into urea, which is converted into ammonium then nitrate in the soil.

Nitrogen release rate is dictated by the length of the UF chains.

WIN extends nutrient release up to 22 weeks.

Key Benefits

NITROFORM® slow-release fertilizer has been widely applied by turfgrass and tree care managers as well as professional growers looking for a long-lasting source of N that consistently delivers long-term nutrition to help support root development and sustained growth.

- **One of the safest and longest-lasting** slow-release sources of N available
- Consistent feeding for up to **22 weeks or longer**
- Nitrogen from **methylene urea (MU) and urea-formaldehyde (UF)**
- Over two-thirds is **WIN**
- **Reduced thatch** development
- **Increased growth** of beneficial soil microorganisms
- **Less potential risk** of leaching into groundwater

Industries: Lawn Care, Golf, Sports Turf, Tree Care, Ornamentals

Opportunities

TURF

- The unique release properties of NITROFORM® fertilizer promote vigorous rooting that helps to create rapid development of root tissue
- The result is dense turfgrass that can withstand the rigors of today's more intensively managed turfgrass practices, with minimal impact from insects, weeds and diseases

ORNAMENTAL

- Used as a pre-plant amendment, the release properties of NITROFORM® fertilizer assist in more rapid root development and establishment

With potting mixes high in woody content, soluble N can be tied up by microbes as they break down organic material.

NITROFORM® fertilizer can provide long-term N to satisfy the needs of plants and microorganisms.

- Can also be used as a topdress application for both container- and field-grown ornamentals in many areas

TREES

- Formulated to stay suspended in solution
- Balanced and dependable source of N that can be injected into the soil around the tree's root zone

Options

Granule options at actual size	Powder	Mini	Regular
SGN	**<0.25mm**	**120-180**	**220-270**
Total Nitrogen	39%	39%	39%
Urea Nitrogen	3%	3%	3%
Slowly Available Water Soluble Nitrogen*	7.5%	7.5%	7.5%
Water Insoluble Nitrogen (WIN)	28.5%	28.5%	28.5%
Slow-Release Nitrogen (% of Total N) AOAC 945.01 Method	92%	92%	92%

** Slowly available N from UF.*

Nutralene®
Slow-Release Fertilizer

SLOW-RELEASE NITROGEN TECHNOLOGY

Up to 16 Weeks of Available Nutrition

Consistent, Long Lasting Release of Nutrition

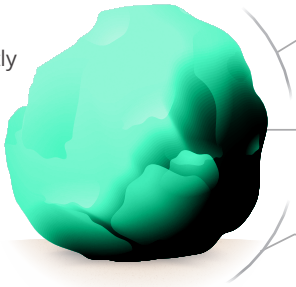
NUTRALENE® slow-release fertilizer is a methylene urea (MU) source with a guaranteed analysis of 40-0-0. The consistent, long-lasting release of nutrition for up to 16 weeks provides a cost-effective, low-maintenance solution to effectively increase root growth, which helps to improve turfgrass health.

NUTRALENE® slow-release methylene urea, has been widely applied by turfgrass professionals, cost-effective, low-maintenance solution, which also effectively increases root growth. NUTRALENE® fertilizer offers a range of sizes giving you the maximum in rate flexibility.

Methylene Urea Technology

Feeds turfgrass for up to 16 weeks, consistently metering nutrition

SGN options
- Micro
- Mini
- Regular

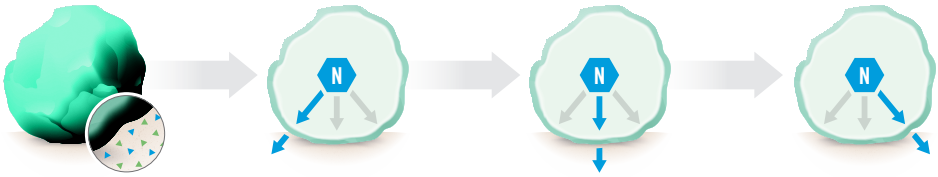


Optimum particle sizing for a variety of turfgrass heights

47.5% of total nitrogen (N) is water-insoluble nitrogen (WIN) and low-salt index of 25

Broken or damaged particles don't affect nutrient release rate

How It Works



Release is triggered by soil temperature and microbial activity in unison with turfgrass demand.

1 - Typically 50% of its nutrition is released in the first 4 to 6 weeks.

2 - Another one-third of the N source is released in 6 to 12 weeks.

3 - The remainder is released beyond 12 weeks.

Key Benefits

- Slowly releases its 47.5% WIN, which **enriches soil's microbiology,** helping to increase root growth and density
- Up to **16 weeks of consistent plant nutrition**
- Gradual, consistent release enhances **steady, sustained growth to minimize flushes**
- **Micro, mini and regular SGN** options
- Extended feeding with **fewer applications**
- By providing a more **reliable and sustainable release**, the peaks and valleys caused by more inconsistent fertilizers are avoided
- Release is **not affected by mechanical damage**
- **Less potential risk of nitrate leaching or runoff**

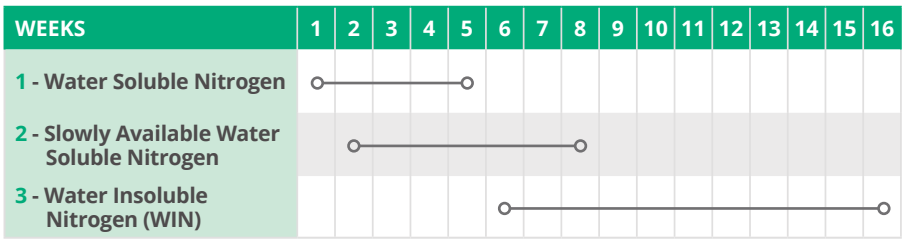
Industries: Lawn Care, Golf, Sports Turf

Options

Granule options at actual size	Powder	Mini	Regular
SGN	**80-110**	**120-180**	**220-270**
Total Nitrogen	40%	40%	40%
Urea Nitrogen	4%	4%	4%
Slowly Available Water Soluble Nitrogen*	17%	17%	17%
Water Insoluble Nitrogen (WIN)	19%	19%	19%
Slow-Release Nitrogen (% of Total N) AOAC 970.04 Method	90%	90%	90%

** Slowly available N from UF.*

Nutrient Release



Nutralene®

NITAMIN®
TARGETED FOLIAR NITROGEN

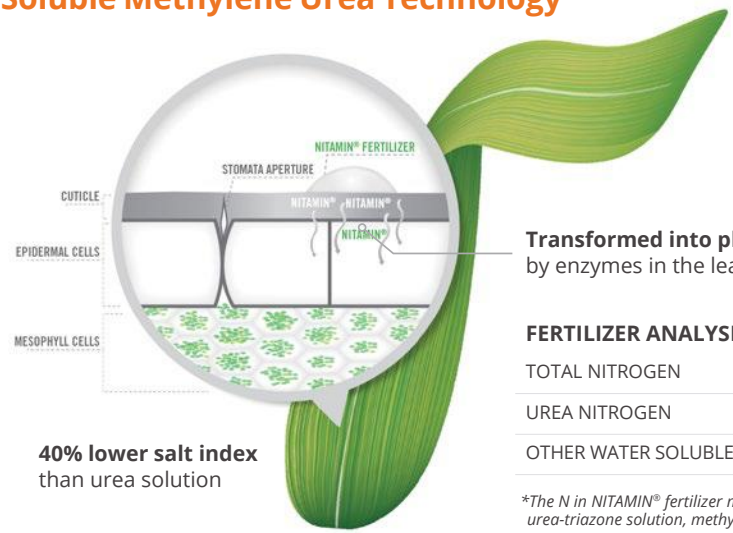
LIQUID SLOW-RELEASE NITROGEN TECHNOLOGY

Up to 8 Weeks of Available Nutrition
Rapid & Extended Foliar Absorption

NITAMIN® targeted foliar nitrogen (N) is a flexible, advanced liquid slow-release soluble triazone methylene urea (MU) technology that increases application safety and assures your turf a smooth nitrogen (N) release pattern. NITAMIN® is a patented, liquid nutrient source specifically designed for foliar applications in turfgrass, row crops, vegetables and fruits.

The Nitrogen in NITAMIN® is released via microbial activity to provide nutrition for up to 2 months. University research shows the advantages its humectant properties provide for rapid and extended foliar absorption. The high N content — yet lower salt index than a straight urea solution — adds that critical margin of performance, efficiency and safety. By using this flexible, advanced technology, your customers can increase application safety, and customize their fertility programs. It is particularly useful as a carrier for crop protection chemicals.

Soluble Methylene Urea Technology



40% lower salt index
than urea solution

Transformed into plant-available N
by enzymes in the leaf tissue

FERTILIZER ANALYSIS

TOTAL NITROGEN	30%
UREA NITROGEN	12%
OTHER WATER SOLUBLE NITROGEN*	18%

**The N in NITAMIN® fertilizer meets AAPFCO definitions for urea-triazone solution, methylene urea and urea.*

Unique combination of small-to-medium sized molecules of 100% water soluble methylene urea, in association with just the right amount of urea solution.

Patented formulation confers highly desirable humectant properties, preventing rapid drying and crystallization on the leaf surface, which allows more N to be absorbed through the leaf tissue.

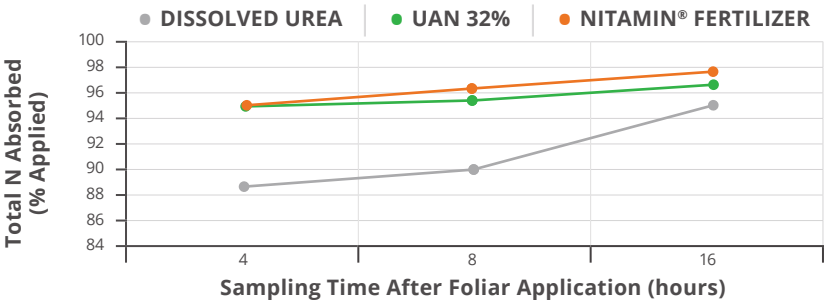
Key Benefits

NITAMIN® fertilizer has been successfully used by turfgrass managers as well as specialty ag and row crop growers.

- **Increased uptake efficiency -** Humectant properties result in slow drying on the leaf blade, allowing for increased uptake of other tank mix components
- **Soil enriching -** Research shows that methylene urea fertilizers act as a food (carbon) source for soil microorganisms
- **Flexible** - Compatible with a wide range of micronutrients and protection chemicals
- **High N content -** Higher N content (30%) than most liquid N sources, meaning less measuring and reduced storage space
- **Safe -** low salt index means reduced burn potential compared to quick-release N, protecting high value turf like putting greens and tees from unintended injury
- **Targeted** - Applied directly to the leaf surface for rapid absorption and green-up

Leaf Absorption Study (growth chamber study)

Nitamin® fertilizer absorbs more rapidly than both urea ammonium nitrate (UAN) and dissolved urea, allowing the plant to absorb more nutrients.

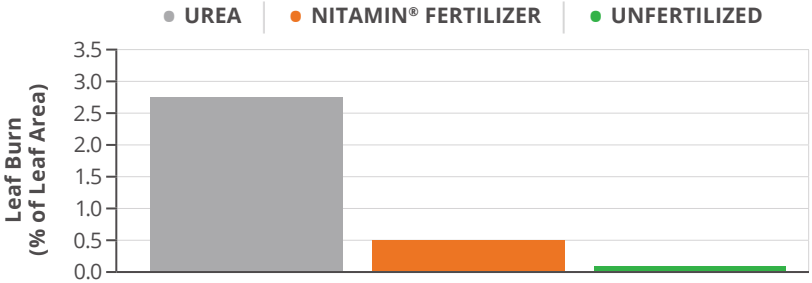


Source: Oosterhuis et al., 2014

Cotton (Stoneville 4288 B2RF) planted on February 18. Foliar treatments applied on March 26 at a rate of 10 lbs per acre each.

Crop Safety

Study shows that NITAMIN® fertilizer has a lower burn potential than urea making it a safer source of N for plants.



Source: Hicks and Galt, 2007. Hulst Research Farm Services.

Leaf burn study conducted on almonds. Foliar fertilization was applied at a rate of 14 lbs. N/acre in June. Leaf burn measured in July.

UMAXX®
STABILIZED NITROGEN

DUAL STABILIZED NITROGEN TECHNOLOGY

Up to 12 Weeks of Available Nutrition

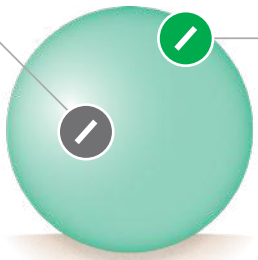
Dual Mode of Nitrogen Protection for MAX Availability to Turf

UMAXX® stabilized nitrogen fertilizer is a soluble granular with a dual-inhibitor technology that provides protection against all three forms of nitrogen (N) loss — leaching, denitrification and volatilization. It is a urea-based product with a 46-0-0 analysis containing both urease inhibitor (NBPT) and a nitrification inhibitor (DCD) to extended the availability of nitrogen in the soil. A completely soluble granular, UMAXX® fertilizer is equally effective whether spread dry or dissolved in a spray mix.

Dual-Inhibitor Technology

Urease inhibitor
to help prevent naturally occurring urease from breaking down urea

SGN options
- Mini
- Regular



Nitrification inhibitor
to slow the conversion of ammonium to nitrate

Up to 12 weeks
of plant response

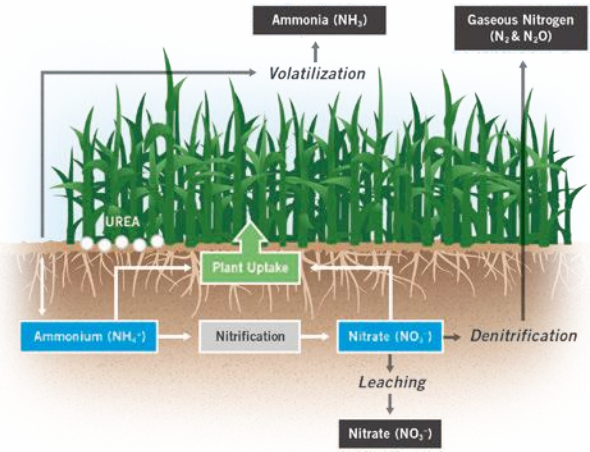
How It Works

REDUCES VOLATILIZATION

Urease inhibitors work while fertilizer is on the soil surface to slow the enzyme urease from breaking down urea to ammonium and ammonia gas, which is subject to volatilization loss. This allows time for urea to move below the surface by rainfall or irrigation.

REDUCES DENITRIFICATION AND LEACHING

Nitrification inhibitors work to slow soil bacteria from converting ammonium into nitrate, which is highly subject to denitrification and leaching.



Key Benefits

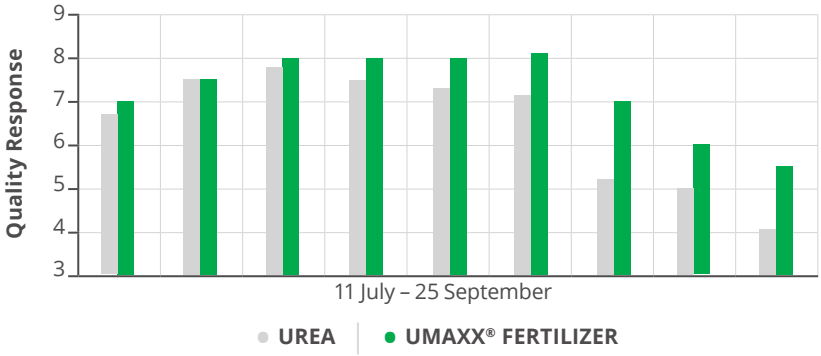
UMAXX® stabilized nitrogen fertilizer was specially formulated for the golf market for versatility of application and 12 weeks of dependable extended nitrogen availability. UMAXX® can reduce labor strain, avoid turf famine and efficiently sustain turf health leading to reduced weed and disease pressure.

- **Dependable performance -** Performs consistently regardless of soil temperature or weather
- **Dual mode nitrogen protection technology -** NBPT and DCD Inhibitors
- **3 Forms of nitrogen protection -** from leaching, denitrification and volatilization
- **Up to 12 weeks of plant response**
- **Quick Green-up and Sustained color**
- **Completely soluble granular -** can be sprayed or spread
- **Virtually eliminates N loss -** due to mower pick-up
- **Can be tank mixed -** with most fertilizers, control products, or other inputs but a jar test is recommended
- **Environmentally responsible** - with low potential for nutrient leaching, denitrification, runoff or volatilization

Proven Performance

Research performed at The Ohio State University shows how UMAXX® fertilizer compares to standard urea. The initial response of UMAXX® fertilizer was similar to urea with extended turfgrass response.

Comparison of UMAXX® Fertilizer to Urea on Kentucky Bluegrass - Ohio



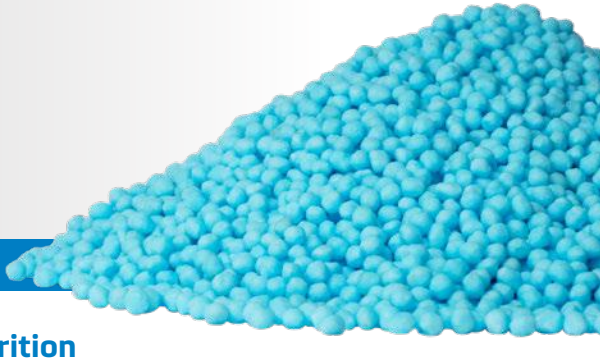
Source: Street et al., The Ohio State University . Application: 1 lb. per 1,000 sq. ft.

The underlying data was provided by The Ohio State University under a Research Trial Financial Support Agreement. The Ohio State University does not endorse or recommend any product or service.

Options

Granule options at actual size	Mini	Regular
ANALYSIS	**46-0-0**	**46-0-0**
SGN	120-180	220-270
Uses	As an ingredient in dry or liquid fertilizer blends. Can be applied directly or solubilized for spray application.	

UFLEXX
STABILIZED NITROGEN



DUAL STABILIZED NITROGEN TECHNOLOGY

Up to 8 Weeks of Available Nutrition

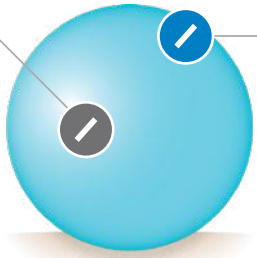
Flexible Application (Spread or Spray) & Dual Mode Nitrogen Protection

UFLEXX® stabilized nitrogen fertilizer is a soluble granular with a dual-inhibitor technology (NBPT and DCD) that protects against three forms of nitrogen (N) loss - leaching, denitrification and volatilization. UFLEXX® allows time for nitrogen to move into the root zone and be available to the turf/plant longer. As a result, there is immediate green-up, followed by sustained turfgrass color for up to 8 weeks.

Dual-Inhibitor Technology

Urease inhibitor
to help prevent naturally occurring urease from breaking down urea

SGN options
- Mini
- Regular



Nitrification inhibitor
to slow the conversion of ammonium to nitrate

Up to 8 weeks
of plant response

How It Works

REDUCES VOLATILIZATION

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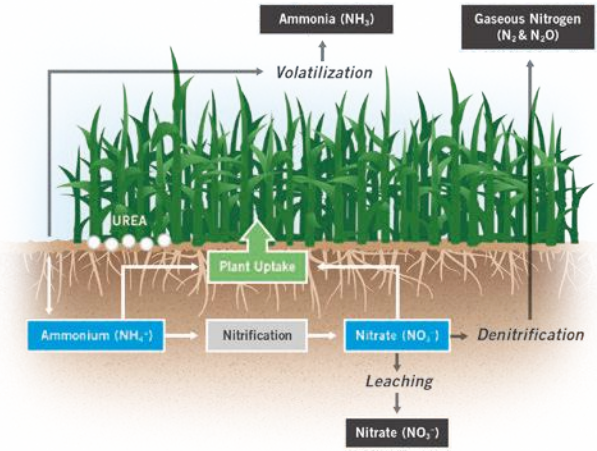
Nitrification inhibitors work to slow soil bacteria from converting ammonium into nitrate, which is highly subject to denitrification and leaching.



Key Benefits

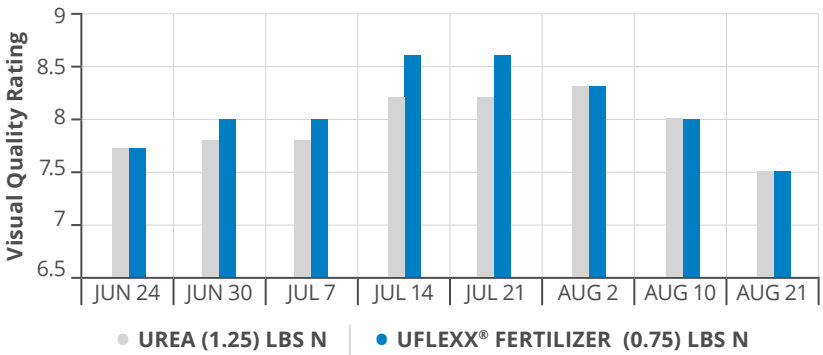
UFLEXX® stabilized nitrogen fertilizers offers flexible application due to solubility and compatibility with many turf protection chemicals, easily adapting to existing spray or spread turf management programs.

- **Dependable performance -** Performs consistently regardless of soil temperature or weather
- **Dual mode nitrogen protection technology -** NBPT and DCD Inhibitors
- **3 Forms of nitrogen protection -** from leaching, denitrification and volatilization
- Provides up to **8 weeks of plant response**
- **Quick Green-up and sustained color**
- **Flexible** - soluble granular can be spread or sprayed
- **Durable -** eliminates N loss due to mower pick-up
- **Can be tank mixed -** with most fertilizers, control products, or other inputs but a jar test is recommended
- **Environmentally responsible -** with low potential for nutrient leaching, denitrification, runoff or volatilization

Proven Performance

According to a University of Missouri study, UFLEXX® stabilized nitrogen fertilizer produced the same or better performance in both short-term and sustained visual quality than more urea (UFLEXX® at 0.75 lb. N vs. urea at 1.25 lb. N).

Comparison of Reduced Rate of UFLEXX® Fertilizer to High Rate of Urea on Quality of a Tall Fescue/Kentucky Bluegrass Blend



Source: Lloyd and Xiong, 2010; various N rates

The underlying data was provided by the University of Missouri under a Research Trial Financial Support Agreement. The University of Missouri does not endorse or recommend any product or service.

Options

Granule options at actual size	Mini	Regular
ANALYSIS	**46-0-0**	**46-0-0**
SGN	120-180	220-270
Uses	As an ingredient in dry or liquid fertilizer blends. Can be applied directly or solubilized for spray application.	

DUAL NITROGEN STABILIZER TECHNOLOGY

Up to 12 Weeks of Available Nutrition

Gain Control and Versatility of Your Turfgrass Management Program

DuoTech™ Dual Nitrogen Stabilizer Technology is a concentrated fertilizer additive developed for turfgrass professionals to be blended with dissolved urea, UAN solution and ammonium sulfate. DuoTech is also highly versatile, allowing you to custom manage rates to efficiently provide the needed plant response from weeks to months per application.

2 Modes of Action, 3 Forms of Nitrogen Protection

DuoTech™ contains two of the top performing nitrogen stabilizer technologies N-(n-butyl)thiophosphoric triamide (NBPT), a urease inhibitor and dicyandiamide (DCD), an organic nitrogen material and nitrification inhibitor. The NBPT reduces nitrogen loss by protecting your N source from ammonia volatilization and the DCD reduces leaching and denitrification by keeping nitrogen in the ammonium form longer, which extends availability to the plant. Together, these components allow extended and more complete nitrogen utilization in your turfgrass and ornamental applications.

Key Benefits

The customization of DuoTech™ Dual Nitrogen Stabilizer Technology allows applicators to gain control and versatility of their turfgrass management program.

- **2 Modes of nitrogen stabilization -** NBPT and DCD Inhibitors
- **3 Forms of nitrogen protection -** from leaching, denitrification and volatilization
- **Concentrated & easy to tank mix** - with urea, UAN solution and ammonium sulfate
- **Extends nitrogen availability -** Keeps N in ammonium form longer
- **Dependable performance** - in a variety of soil conditions including moisture and temperature
- **Environmentally sustainable -** greatly reduces nitrogen loss to the environment
- **Versatile and flexible -** allows you to customize the rate and length of your nitrogen performance

CONTACTS

Listed here is the contact information for Allied Nutrients and organizations we support in promoting the proper and responsible use of fertilizers.

Allied Nutrients Contacts

Customer Service

Email: Contact@AlliedNutrients.com

For Order Placement: CustomerCare@AlliedNutrients.com

Toll Free: (888) 220-0013

Local: (330) 220-0524

Sales

West: Bowden (Bo) Hepler - (503) 703-4163

NE Mid-Atlantic: Andy Drohen - (413) 685-5469

Central/Midwest: Chris Derrick - (205) 382-7765

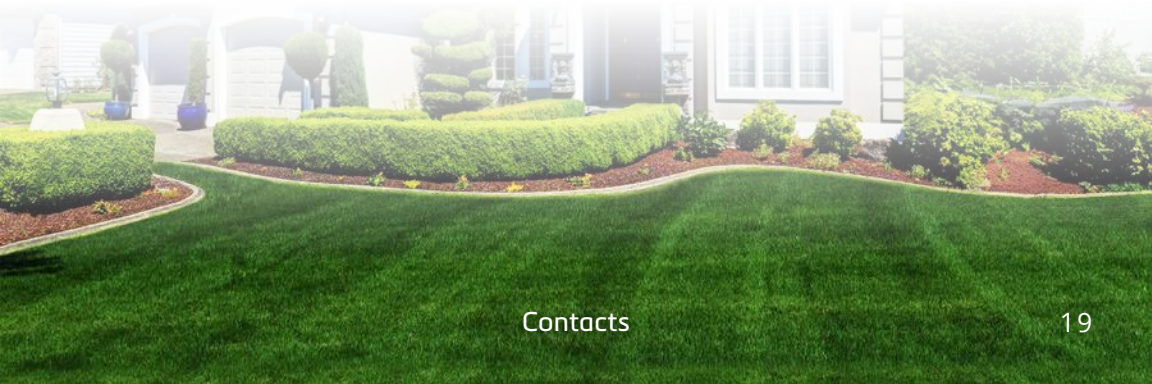
Southeast: Scott Maxwell - (813) 310-3749

Website

www.AlliedNutrients.com

Organization Contact Information

- **AAPFCO** – www.AAPFCO.org
- **Golf Course Superintendents Association of America (GCSAA)** – www.GCSAA.org
- **National Association of Landscape Professionals (NALP)** – www.LandscapeProfessionals.org
- **Project Evergreen** – www.ProjectEvergreen.org
- **Responsible Industry for a Sound Environment (RISE)** – www.PestFacts.org
- **4R Nutrient Stewardship** – www.NutrientStewardship.com



NITROGEN SOURCE COMPARISON CHART

Enhanced Efficiency Fertilizers (EEFs) vs. Untreated/Readily Available Fertilizer

	UNTREATED/READILY AVAILABLE		CONTROLLED-RELEASE
	UREA	AMMONIUM SULFATE	TTRU®
% Nitrogen	46	21	40 - 44
EEF	No	No	Yes
Release Mechanism	Solubility / Hydro-lysis	Solubility	Temperature-Controlled Diffusion
Initial Response	1-2 Days	1-2 Days	1-3 Weeks
Approximate Longevity	1 -4 Weeks	1 - 4 Weeks	1.5 - 6 Months
Color	White	White	Light Blue
Application Visibility	Good	Good	Good
Labor Intensity	High	High	Low - Moderate
Leaching Potential	High	High	Very Low
Volatilization Potential	High	Low	Very Low
Temperature Sensitivity	Low	Low	Moderate
Moisture Sensitivity	High	High	Low
Preferred at pH > 7	No	No	Yes
Preferred at pH < 7	Yes	Yes	Yes
Salt Index	74	68	N/A**
Burn Potential***	High	High	Very Low

* DUOTECH™ is not a fertilizer. It is a fertilizer additive containing urease and nitrification inhibitors. The activity is similar to that of UFLEXX or UMAXX depending on the rate of DUOTECH™ used. Salt index or burn potential is based on the nitrogen fertilizer source used (urea, ammonium sulfate, UAN).

Enhanced Efficiency Fertilizers (EEFs) Categories

Controlled-Release Fertilizers

Polymer-coated products that precisely meter nutrient release based on soil temperature— making nutrition available when plants can use it.

Slow-Release Fertilizers

Reacted and polymer-coated sulfur-coated urea (PCSCU) technologies slow the release of nitrogen into the soil, making it available to the plant over a longer period of time.

Stabilized Nitrogen Fertilizers

Contains urease and nitrification inhibitors, enhancing nitrogen availability for the plant and reducing nitrogen loss due to volatilization, denitrification and leaching.

SLOW-RELEASE				STABILIZED NITROGEN		
XCU®	NUTRALENE®	NITROFORM®	NITAMIN®	UFLEXX®	UMAXX®	DUOTECH™ *
41 - 43	40	39	30	46	46	No, Based on Nitrogen Source
Yes	Yes	Yes	Yes	Yes	Yes	Additive
Catastrophic Release / Diffusion Hybrid	Microbial	Microbial	Microbial	Solubility / Hydrolysis	Solubility / Hydrolysis	Solubility / Hydrolysis
3-7 Days	1-2 Weeks	2-3 Weeks	2-5 Days	2-5 Days	2-5 Days	2-5 Days
1.5 - 2.5 Months	3 - 4 Months	4 - 5 Months	1.5 - 2.5 Months	1.5 - 2 Months	2.5 - 3 Months	1.5 - 3 Months Rate Dependent
Blue Green	Bright Green	Bright Blue	Clear Liquid	Light Blue	Light Green	Teal Fine Granule
Good	Good	Good	Add Spray Pattern Indicator	Good	Good	Add Spray Pattern Indicator
Moderate	Low	Low	Moderate	Moderate	Low - Moderate	Low - Moderate
Low	Low	Very Low	Low	Low	Very Low	Low
Moderate	Very Low	Very Low	Low	Very Low	Very Low	Very Low
Moderate	High	High	High	Low	Low	Low
Moderate	Low	Low	Low	Low	Low	Low
No	Yes	Yes	No	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes
N/A**	25	10	0.4	74	74	Based on Nitrogen Source
Low	Very Low	Very Low	Low	High	High	Based on Nitrogen Source

** For coated products, the low rate of solute release from the coating results in an extremely low effective salt index, and therefore very low burn potential.

*** Although salt index may be low for some products, salts can accumulate from any product when used in container plants if adequate flushing is not provided.

ALLIED NUTRIENTS™

Growing a Greener World, Together

Allied Nutrients™ provides the leading, innovative enhanced efficiency fertilizers (EEFs) that optimize nutrient uptake, minimize nutrient loss and increase environmental sustainability.

TRU™ TRUSTED TIME-RELEASE UREA

Nitroform® Slow-Release Fertilizer

UMAXX® STABILIZED NITROGEN

XCU® Slow-Release Fertilizer

UFLEXX® STABILIZED NITROGEN

NITAMIN® TARGETED FOLIAR NITROGEN

Nutralene® Slow-Release Fertilizer

DUOTECH™ DUAL NITROGEN STABILIZER TECHNOLOGY