FENIX

BORN FOR GROWING

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The product range of FENIX fertilizers brings your turf just the nutrients it needs.

When developing FENIX fertilizers, we concentrated on the requests and knowledge coming from professional greenkeepers.

Equilibrated Granulation

Equilibrated fertilizer-granulation is important for the turf to be fertilized evenly. In fact, granulation directly influences quality appearance of the turf and uniformity of the turf area, which is the most important thing we expect from our turf and is what new FENIX fertilizers provides.

Fertilizers with Slow-Releasing Nitrogen

Professionals are interested in long-term and equal accessibility of nutrients. They don't want all nitrogen to act at once. FENIX contains two different forms of controlled nitrogen-release, XCU and MU.

Controlled-Nitrogen Release with Different Content

There are fertilizers having 30 - 50 % of nitrogen with controlled release. You can apply FENIX with 30 % of XCU for the grass growth on light soils with nutritional deficiency, supplying a higher amount of nutrients to immediately fill the deficiency up. Regularly fertilized turfs, being in good condition, shall be treated with a fertilizer comprising 40 % or 50 % of nitrogen with controlled release.

Representation of all Important Nutrients

Do you want to fertilize your lawn turf for a whole year, using phosphorous fertilizers? Do you want to use the ratio of nutrients suitable for fast-growing newly-seeded areas? Or do you prefer higher potassium-content with your fertilizer? You will always find the answer in the FENIX product-range. FENIX fertilizers are based on the requirements of professional turf-growers and are designated for turfs. FENIX fertilizers contains magnesium, an important element for excellent appearance and a good health condition of your turf.

FENIX Fertilizers – BORN FOR GROWING

These fertilizers have been developed using the most recent theoretic knowledge acquired both in the research with experts in nutrition of plants and from practical experience of greenkeepers and lawn-installers.
They are ideal for adequate fertilization planing.

Advantages:

- A sufficient nitrogen ratio is in easily acceptable forms. That's why turf growth has been significantly reacting already within one week since fertilization.
- A part of nitrogen is in the form that starts to progressively act with some delay to provide for equal nutrition for some 2 - 3 months after applying the fertilizer.
- The fertilizers are conceived (with their nutrients' ratio) to respect different requirements of plants according to their growth and changeable conditions in different seasons of the year.
- 4 applications have a similar effect like 14 applications of classical fertilizers.
- It helps have abundant, strong, healthy, richly green turf.
- They help reduce stress – summer dryness and drought, winter frost and chill.
- The calibration of their granules ensures a much better equal application of the fertilizers.

Use:

Particularly for golf courses and their fairways, rough, grassy sporting playgrounds. We recommend its use for turfs requiring a high-quality growth state, permanent and equal growing with simultaneously decorative appearance.

One application provides for equal nutrition for a period of 2 - 3 months. This helps to choose a suitable fertilizer composition, according to current needs of the growth depending on the season of the year, climate conditions and the turf growth condition. There is a choice of fertilizers with controlled nitrogen release (Basic, Premium) or gradual nitrogen release (Balanced), happening either using a special two-layer coat combining polymer membrane and poly-sulphur membrane (Basic, Premium) or chaining molecules of urea (Balanced). Those special forms will provide a prolonged time of the fertilizer effect.

Nitrogen is gradually-released for the needs of plants to minimise nitrogen loses when fertilizing The greatest advantage of those fertilizers is their ability of always choosing a suitable fertilizer composition. At the same time, just 3-4 applications are needed during the year to have equally growing turf. Compared to standard fertilizers, where you have to fertilize your turf about 14 times a year. Contrary to fertilizers with a whole-year action, the ratio of nutrients can be gradually changed during the year according to the current status of your turf grown, soil conditions and especially in compliance with variable climate conditions (spring, summer, autumn).

That's why these fertilizers allow you to react to changing vegetation needs during the year. Contrary to fertilizers with a whole-year action, the ratio of nutrients can be gradually changed during the year according to the current status of your turf grown, soil conditions and especially in compliance with variable climate conditions (spring, summer, autumn). That's why these fertilizers allow you to react to changing vegetation needs during the year.

The fertilizers don't contain nitrogen in the nitrate form (NO_3^-) to minimise nitrates being washed out of soil. Moreover, gradually releasing coated nitrogen allows for less frequent fertilization with simultaneously limiting its losses. Its granules are standard-calibrated to 2-3 mm. That very limited interval of the granule-size provides for the fertilizer to be applied much more equally.

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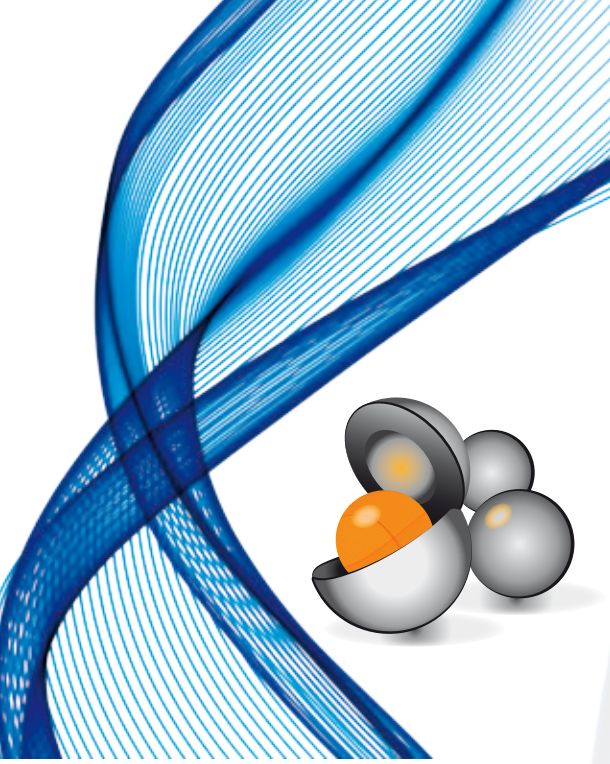


FENIX Basic

controlled release fertilizer

Basic Range:

Basic product range of the fertilizers designated to provide good turf growths with equal nutrition.

This range is typical for its content **of nitrogen being composed of 30 % (Basic Pre-seed 40 %)** of the whole nitrogen quantity, in the form of urea granules, having a 2-layer coat consisting of a combination of polymer membrane and poly-sulphur membrane – a special coating providing a long-term effect of the fertilizer.

This range emphasises a different ratio of basic nutrients according to the season. The Basic range contains magnesium for your turf's richly green colour. In addition, the Basic range is typical for its complex contents of all basic nutrients: N, P, K, Mg, S.

Another advantage is that the fertilizers have a reduced content of chlorides to consequently reduce the risk of soil over-salting with ballast chlorides. This range of fertilizers is the most suitable for turfs with sandy, really easily permeable soil and well-working drainage and for less-intensively grown turfs. The fertilizers don't contain any nitrate-type nitrogen to minimise nitrates being washed out of the ground.

FENIX Basic Pre-seed 15-20-10+3MgO

FENIX Basic Pre-seed — controlled release fertilizer

40% XCU | 2–3 MONTH | 20 KG

Fertilizers NPK (Mg) 15-20-10 (+3MgO) mixed fertilizer
15 % N Total nitrogen
6,5 % N-NH_4 Ammonia nitrogen
8,5 % N-NH_2 Urea nitrogen
20 % P_2O_5 Phosphorus pentoxide soluble in neutral ammonium citrate and in water (= 8,7 % P Phosphorus)
18,6 % P_2O_5 Phosphorus pentoxide, water-soluble (= 8,1 % P Phosphorus)
10 % K_2O Potassium oxide, water-soluble (= 8,3 % K Potassium)
3 % MgO Magnesium oxide, water-soluble (= 1,8 % Mg Magnesium)

FENIX Basic Spring 22-05-11+2MgO

FENIX Basic Spring — controlled release fertilizer

30% XCU | 2–3 MONTH | 20 KG

Fertilizers NPK (Mg) 22-05-11 (+2MgO) mixed fertilizer
22 % N Total nitrogen
8 % N-NH_4 Ammonia nitrogen
14 % N-NH_2 Urea nitrogen
5 % P_2O_5 Phosphorus pentoxide soluble in neutral ammonium citrate and in water (= 2,2 % P Phosphorus)
4 % P_2O_5 Phosphorus pentoxide, water-soluble (= 1,7 % P Phosphorus)
11 % K_2O Potassium oxide, water-soluble (= 9,1 % K Potassium)
2 % MgO Magnesium oxide, water-soluble (= 1,2 % Mg Magnesium)

FENIX Basic Summer 19-00-19+2MgO

FENIX Basic Summer — controlled release fertilizer

30% XCU | 2–3 MONTH | 20 KG

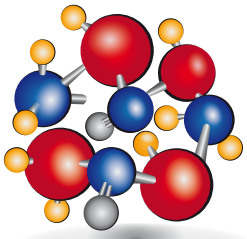
Fertilizers NK (Mg) 19-19 (+2MgO) mixed fertilizer
19 % N Total nitrogen
4,5 % N-NH_4 Ammonia nitrogen
14,5 % N-NH_2 Urea nitrogen
19 % K_2O Potassium oxide, water-soluble (= 15,8 % K Potassium)
2 % MgO Magnesium oxide, water-soluble (= 1,2 % Mg Magnesium)

FENIX Basic Autumn 13-00-26+2MgO

FENIX Basic Autumn — controlled release fertilizer

30% XCU | 2–3 MONTH | 20 KG

Fertilizers NK (Mg) 13-26 (+2MgO) mixed fertilizer
13 % N Total nitrogen
5,8 % N-NH_4 Ammonia nitrogen
7,2 % N-NH_2 Urea nitrogen
26 % K_2O Potassium oxide, water-soluble (= 21,6 % K Potassium)
2 % MgO Magnesium oxide, water-soluble (= 1,2 % Mg Magnesium)



FENIX Balanced

slow release fertilizer

Balanced Range:

A unique range of fertilizers using long-term effect of nitrogen incorporated in oligomers with different length, composed of chained urea molecules. It's designated for equilibrated basic nutrition of good turf areas.

This range differs from the Basic- and the Premium product-ranges because of containing **40 % of the total nitrogen quantity** in the form of MU (chained urea). It is a fertilizer with gradually releasing nitrogen due to microbial activity in the ground. This will allow the fertilizer to have effect for a longer period of time.

The fertilizers in this product range contain phosphorus in special formulas suitable for all times of year for a more balanced supply of phosphorus to plants. In addition, the Balanced product-range is also typical for its complex contents of all basic nutrients: N, P, K, Mg, S. Another advantage of the Balanced fertilizer-range consists of its reduced content of chlorides to minimise the risk of over-salting soil with ballast chlorides.

The MU nitrogen-form is just little mobile in the ground so washing nitrogen out of soil is really limited even in highly permeable sandy soils of playing areas or courses.

FENIX Balanced Spring 22-05-11+2MgO

FENIX Balanced Spring — slow release fertilizer — 40% MU — 2–3 MONTH — 20 KG

Fertilizer NPK (Mg) containing crotonyl-dendi-urea or isobutyl-dendi-urea, alternatively urea-formaldehyde
22-05-11 (+2MgO) mixed fertilizer

- 22 % N Total nitrogen
  - 6,6 % N-NH_4 Ammonia nitrogen
  - 6,6 % N-NH_2 Urea nitrogen
  - 8,8 % N Urea-formaldehyde nitrogen
  - 3,3 % N Nitrogen of urea-formaldehyde soluble just in hot water
  - 4,6 % N Nitrogen of urea-formaldehyde soluble just in cold water
- 5 % P_2O_5 Phosphorus pentoxide soluble in neutral ammonium citrate and in water (= 2,2 % P Phosphorus)
  - 4 % P_2O_5 Phosphorus pentoxide, water-soluble (= 1,7 % P Phosphorus)
- 11 % K_2O Potassium oxide, water-soluble (= 9,1 % K Potassium)
- 2 % MgO Magnesium oxide, water-soluble (= 1,2 % Mg Magnesium)

FENIX Balanced Summer 19-08-19+2MgO

FENIX Balanced Summer — slow release fertilizer — 40% MU — 2–3 MONTH — 20 KG

Fertilizer NPK (Mg) containing crotonyl-dendi-urea or isobutyl-dendi-urea, alternatively urea-formaldehyde
19-08-19 (+2MgO) mixed fertilizer

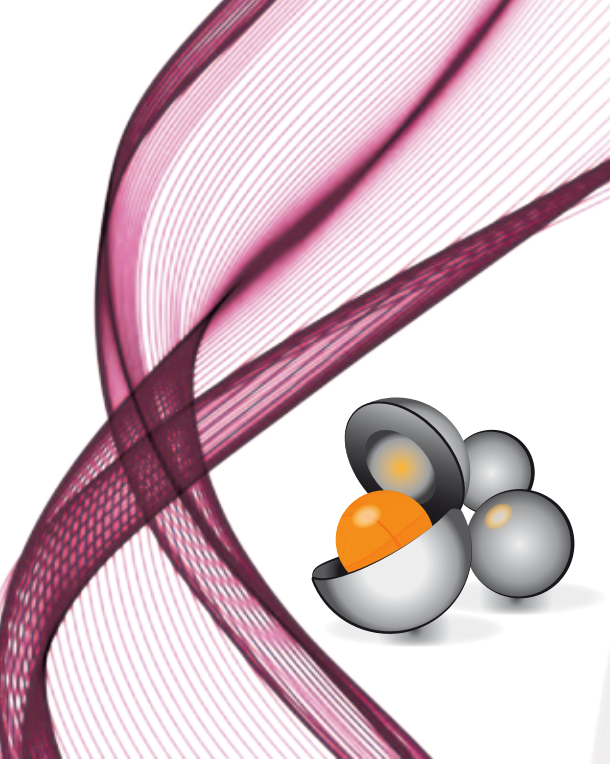
- 19 % N Total nitrogen
  - 3,6 % N-NH_4 Ammonia nitrogen
  - 7,8 % N-NH_2 Urea nitrogen
  - 7,6 % N Urea-formaldehyde nitrogen
  - 2,9 % N Nitrogen of urea-formaldehyde soluble just in hot water
  - 3,9 % N Nitrogen of urea-formaldehyde soluble just in cold water
- 8 % P_2O_5 Phosphorus pentoxide soluble in neutral ammonium citrate and in water (= 3,5 % P Phosphorus)
  - 7 % P_2O_5 Phosphorus pentoxide, water-soluble (= 3 % P Phosphorus)
- 19 % K_2O Potassium oxide, water-soluble (= 15,7 % K Potassium)
- 2 % MgO Magnesium oxide, water-soluble (= 1,2 % Mg Magnesium)

FENIX Balanced Autumn 13-05-24+3MgO

FENIX Balanced Autumn — slow release fertilizer — 40% MU — 2–3 MONTH — 20 KG

Fertilizer NPK (Mg) containing crotonyl-dendi-urea or isobutyl-dendi-urea, alternatively urea-formaldehyde
13-05-24 (+3MgO) mixed fertilizer

- 13 % N Total nitrogen
  - 3,4 % N-NH_4 Ammonia nitrogen
  - 4,4 % N-NH_2 Urea nitrogen
  - 5,2 % N Urea-formaldehyde nitrogen
  - 2 % N Nitrogen of urea-formaldehyde soluble just in hot water
  - 2,7 % N Nitrogen of urea-formaldehyde soluble just in cold water
- 5 % P_2O_5 Phosphorus pentoxide soluble in neutral ammonium citrate and in water (= 2,2 % P Phosphorus)
  - 4 % P_2O_5 Phosphorus pentoxide, water-soluble (= 1,7 % P Phosphorus)
- 24 % K_2O Potassium oxide, water-soluble (= 20 % K Potassium)
- 3 % MgO Magnesium oxide, water-soluble (= 1,8 % Mg Magnesium)



FENIX Premium

controlled release fertilizer

Premium Range:

The unique range of fertilizers to achieve equal nutrition of good turf areas.

This range contains **50 % of the total nitrogen quantity**, in form of urea granules in the two-layer coat combining polymer membrane and poly-sulphur membrane, a special coat for the fertilizers' long-lasting effect.

The range also emphasises a different ratio of basic nutrients according to different seasons of the year. The Premium fertilizer-range has an increased content of magnesium, compared to the Basic & Balanced product-ranges, giving the turf a lot richer green coloration. In addition, the Premium fertilizer-range is typical for its complex content of all basic nutrients: N, P, K, Mg, S.

Another great advantage of the fertilizers in the Premium product range is its chloride-free nature. In fact, they don't burden soil with chlorides and they minimise the risk of over-salting the ground. That's why this range of fertilizers is the most suitable for really highly intensively fertilized playing areas or courses for turfs with insufficient drainage and on salted soils.

FENIX Premium Spring 22-05-11+3MgO

FENIX Premium Spring
controlled release fertilizer

50% XCU | 2–3 MONTH | 20 KG

Fertilizers NPK (Mg) 22-05-11 (+3MgO) mixed fertilizer, with a low chlorine content: 22% N Total nitrogen

- 22 % N Total nitrogen
  - 5,2 % $N\text{-}NH_4$ Ammonia nitrogen
  - 16,8 % $N\text{-}NH_2$ Urea nitrogen
- 5 % P_2O_5 Phosphorus pentoxide soluble in neutral ammonium citrate and in water (= 2,2 % P Phosphorus)
  - 4 % P_2O_5 Phosphorus pentoxide, water-soluble (= 1,7 % P Phosphorus)
- 11 % K_2O Potassium oxide, water-soluble (= 9,1 % K Potassium)
- 3 % MgO Magnesium oxide, water-soluble (= 1,8 % Mg Magnesium)

FENIX Premium Summer 19-00-19+3MgO

FENIX Premium Summer
controlled release fertilizer

50% XCU | 2–3 MONTH | 20 KG

Fertilizers NK (Mg) 19-19 (+3MgO) mixed fertilizer, with a low chlorine-content

- 19 % N Total nitrogen
  - 2,5 % $N\text{-}NH_4$ Ammonia nitrogen
  - 16,5 % $N\text{-}NH_2$ Urea nitrogen
- 19 % K_2O Potassium oxide, water-soluble (= 15,8 % K Potassium)
- 3 % MgO Magnesium oxide, water-soluble (= 1,8 % Mg Magnesium)

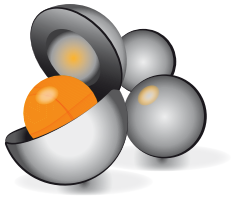
FENIX Premium Autumn 13-00-26+3MgO

FENIX Premium Autumn
controlled release fertilizer

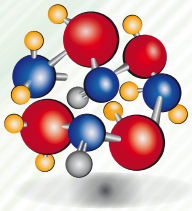
50% XCU | 2–3 MONTH | 20 KG

Fertilizers NK (Mg) 13-26 (+3MgO) mixed fertilizer, with a low chlorine-content

- 13 % N Total nitrogen
  - 2,1 % $N\text{-}NH_4$ Ammonia nitrogen
  - 10,9 % $N\text{-}NH_2$ Urea nitrogen
- 26 % K_2O Potassium oxide, water-soluble (= 21,6 % K Potassium)
- 3 % MgO Magnesium oxide, water-soluble (= 1,8 % Mg Magnesium)



XCU is a breakthrough new product for lawn care and landscape professionals



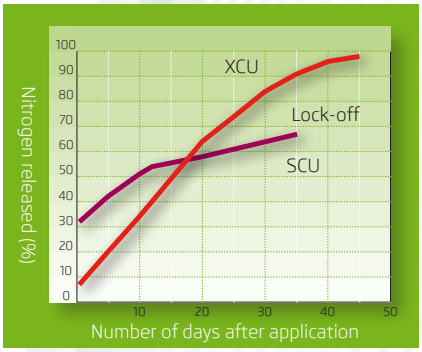
MU Methylen urea

XCU is a new generation of polymer--coated, sulphur coated urea (PCSCU) and it has the highest Nitrogen content (43 %) of any sulphur-coated urea (SCU) on the market today, so the landscape and lawn care professionals can treat more area with less product to control costs.

XCU is unique because it´s the only PCSCU with inner polymer layer, which consists of a thin, cross-linked polyurethane film that encapsulates and protects the urea granule. XCU´s outer layers consist of a thin coating of elemental sulphur and a polymer wax, which work together to protect the polymer coating. This unique coating results in less product breakage, what means less quick release, less surge grown and longer feeding. The other important result of this unique coating is less nitrogen „lock off" than other PCSCUs what means you get the nitrogen you are paying for in the expected time frame.

Most fertilizers release Nitrogen too quicly for turf and plants to use it all. XCU provides just what the plant needs for a longer period of time. Thanks to unique, durable coating XCU provides gradual, consistent nutrient release so one application provides up to 10 weeks of green, healthy turf.
XCU´s superior (see figure) release characteristics and highly efficient feeding mean you are getting the maximum performance and results, saving significant costs in your fertlizer budget.

Comparing to SCU XCU´s release curve is not parabolic but very close linear that means very gradual and steady nitrogen release up to 10 weeks.



Release profiles shown reflect performance in accelerated water-based tests at 30°C.

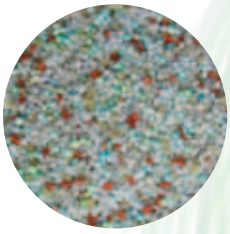
* The term „Lock off" is used for cases where part of the fertilizer granules typically urea is locked up in a membrane so strongly that in this part of the granules will not release the nutrients contained in the desired timeframe, in extreme cases this portion of nitrogen with which was the primary fertilization plan calculated, is not released, and remains completely inaccessible for the plant, or releases over a much longer time horizon and therefore the plant does not have enough nitrogen and suffering.

Methylen urea (MU) is special Slow Release Nitrogen obtained through the condensation of urea molecules with formaldehyde under strictly defined conditions, forming polymer chains of different lengths.The nitrogen release of MU is determined by the design of the polymer lengths and the ration between fast acting nitrogen (Water Soluble Nitrogen) and gradual release nitrogen (Water Insoluble Nitrogen). Shorter chains are more soluble and readily availbale from microbial action. On the other hand, longer chains are more insoluble and require more time to be digested from microbial action in the soil.

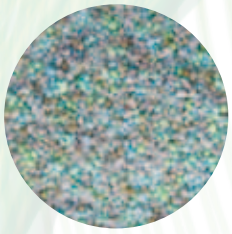
Unlike other Controlled Release Nitrogen sources, the bioavailability of MU mainly depends on the soil micro-organism activity and mineralization action. MU is a source of organic carbon (life energy) and nitrogen (nutrient) for the soil micro-organisms. Using MU you feed and develop the beneficial microbial population responsible for the natural nitrogen mineralization process (breakdown of polymer chains into simple units).The conditions controlling the root growth and activity of the plants, temperature and humidity, are the same as those that regulate the microbial activity. This means that MU nitrogen is made available when the conditions for root activity and growth are optimal. The release of Nitrogen is in sync with crop needs.

In comparison with coated products, the slow release characteristics of MU products will not be lost if particles „are damaged" or „are broken" during shipping and handling. A gradual release of nitrogen is still assured, without nitrogen loss or dumping.

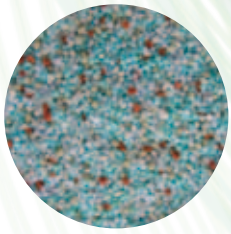
Furthermore, MU protects groundwater from nitrates and keeps nitrogen originated from fertilizers in the soil profile providing uniform and sustained feeding even in hot weather and heavy rains. This is because the Nitrogen release in MU products is not directly dependent only on temperature or hydrolysis, but it requires the microbial activities as well. MU present in some fertlizers from Fenix line is also a source of slowly available water soluble Nitrogen, a meaningful distinction from looking only at water insoluble nitrogen.



FENIX Basic
controlled release fertilizer



FENIX Premium
controlled release fertilizer



FENIX Balanced
slow release fertilizer

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