

BRANDT[®]

Bio-Enhanced Greens Grade Granular Fertilizers

Brandt's Noculate[®]



Brandt's Noculate®

Greens Grade Fertilizers



Contains a key enhancement over conventional chemical fertilizers: BRANDT NOCULATE Microbial Component, a very high potency, bacteria laden blend of microorganisms, enzymes, phytohormones, vitamins, minerals and other proprietary ingredients. Specifically designed for golf course greens and tees, the BRANDT NOCULATE component when blended into our fertilizer:

- Enhances nutrient uptake with Nitrogen fixers
- Provides Sodium salt reduction
- Naturally reduces thatch
- Contains disease suppressing strains of microbes
- Enhances seed germination
- Stimulates beneficial soil microbial activity

The BRANDT NOCULATE MICROBIAL SYSTEM is also available as a water soluble powder for use as a supplement between fertilizer applications.

Humic Matter

Nature's own growth bio-stimulant is the richest, most bio-active form available. Humic matter is highly biodegraded and compressed remains of ancient plant and animal materials. Simply put, these highly decomposed organic materials have fossilized over millions of years and are commonly used as soil additives, soil conditioners and fertilizer activators.

Mined and pelletized for use in BRANDT NOCULATE fertilizers, these humic substances are proven to be natural chelating and carrier agents helping to more effectively transport and make nutrients available to the plant, as well as providing stress relief.

The natural bio stimulant effect of humic matter helps turf to resist stress not only from climactic sources, but also stress due to transplant and nematode infestation.

The use of humic matter greatly enhances nutrient transfer, helping improve the uptake and absorption of macro and micro elements by all turf grasses.

Humic matter has a excellent capacity to chelate Iron, Copper and other metals, thus helping solve chlorosis problems, as well as helping to break up Calcium-Phosphate or Iron-Phosphate, releasing these inactivated elements for use by the plant. Increased general plant vigor, improved root systems and a darker greening of foliage are among the first results which may be observed.

Chemical Fertilizers

BRANDT NOCULATE fertilizers are assembled from the highest quality ingredients available today. Ingredients include, but are not limited to:

Ammonium Sulfate	Manganese Sulfate
Urea	Manganese Sucrate
Methylene Urea	Zinc Sucrate
Houactinite	Magnesium Oxide
Monoammonium Phosphate	Magnesium Sucrate
Potassium Sulfate	Boric Acid
Calcium Sulfate	
Calcium Carbonate	Noculate Package
Calcium Silicate	Microbial Component
Iron Sulfate	Generation
Iron Sucrate	Super Surfactant
	Humic Matter

Organic Component

Most BRANDT NOCULATE Brand fertilizers contain some percentage of naturally derived organic fertilizers. An organic component to granular fertilizer typically provides both a high quality source of slow release nitrogen, but more importantly it provides a ready organic food source which works well in concert with the BRANDT NOCULATE microbial component. The organic component also helps to improve the Cation Exchange Capacity (CEC), and moisture retention in USGA greens.

Enhanced Soil Wetting

This is a blended into all BRANDT NOCULATE fertilizers with Brandt's Generation®, an exciting blend of next generation SuperSurfactants based on Organo-Modified Siloxane technology. This new technological advance allows this product to perform far beyond the capabilities of conventional soil wetters. When blended into a BRANDT NOCULATE fertilizer, Generation actively assists wetting out hydrophobic surfaces allowing for more even uptake of plant nutrients, the reduction of hot spots and helps to overcome Localized Dry Spot.

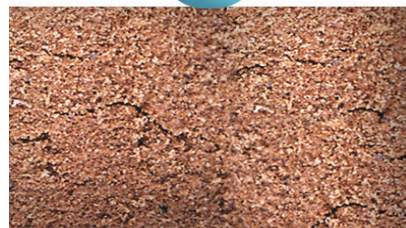
- Wets out hydrophobic surfaces
- Assists in more even uptake
- Reduces hot spots and LDS

Micronutrients

All BRANDT NOCULATE fertilizers contain some blend of micronutrients for balanced turf nutrition. Resulting from intensive new frontier chemistry, Brandt's micronutrient packages have moved into the next generation. This all new process has the granules disperse into 44 micron particles upon contact with soil moisture or water, but also has another significant advantage - Brandt's micronutrient granules are now a sucrate. What was originally finely divided 44 micron particles of oxide has now become ionizable 44 micron particles of sucrates.

Through the process of photosynthesis, plants manufacture carbohydrates in the form of reduced sugars or monosaccharides. These sugars hydrolyze and ionize with water to form negatively charged ions which are given off by the plant to take up positively charged nutrients through the process of ion exchange in the root zone. This sucrating process uses the same natural carbohydrates or natural sugar to form sucrates of Manganese, Iron, Zinc and Magnesium so that each of the micronutrients is in the same ionized form as that which the plant assimilates. While initial solubility in water is low, tests show increasing solubility with time, yielding a sustained release of micronutrition.

The sustained release of these sucrates provide initial plant availability, sustained release over 12 weeks, broader availability in wider pH ranges, and no staining of either turf or concrete.



Drops of water have a skin of surface tension preventing the water from penetrating tightly packed soil.

Super Surfactant



Generation breaks down this wall of surface tension, allowing the water to move freely and uniformly down into the soil.



Brandt's Noculate Bio-Enhanced Greens Grade Granular Fertilizers

Product	Analysis	Application Rates/1000 sq.ft.	Nitrogen Source	% Slow	Trace Elements	SGN	Approx. Longevity
K-Pasa	1-0-20	2.5 Lbs. = 1/2 lb. N/1000 sq.ft. 5 Lbs. = 1 lb. K/1000 sq.ft.	Organic	N/A	Fe, Mn, S	90-100	3-5 weeks
Noculate 8-2-8	8-2-8	6.25 Lbs. = 1/2 lb. N/1000 sq.ft. 12.5 Lbs. = 1 lb. N/1000 sq.ft.	MU, AS, Map, Organic	70%	Fe, Mg, S	90-100	6-10 weeks
Nocu Tain	13-4-13	3.8 Lbs. = 1/2 lb. N/1000 sq.ft. 7.7 Lbs. = 1 lb. N/1000 sq.ft.	MU, MAP, Urea, Organic	30%	Fe, Mn, Mg, S	90-100	6-10 weeks

All products listed above contain Premium Wetting Agents, Greens Grade Humic Matter, and the Special Noculate Microbial Fertilizer Inoculant.

MU = Methylene Urea

MAP = Mono Ammonium Phosphate

AS = Ammonium Sulfate

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