



Isolite®CG – 2mm

Foremost Environmental Solutions



Office: 303.985.0609

Cell: 720.363.0548

www.foremostsolutions.com

isolite@ix.netcom.com

Lakewood, Colorado

GOLF GREEN & TEE AMENDMENT
FEATURING - ISOLITE®CG (R), POROUS CERAMIC
(Pronounced EE-SO-LITE)
Diatomaceous Earth-Based, Not Clay-Based

ISOLITE®CG is a porous ceramic consisting of up to 74% pore space that conserves water, decreases compaction, increases soil surface resiliency, and favorably affects total soil porosity and oxygen levels. ISOLITE®CG has a positive effect on microbial activity, soil moisture content, soil permeability, nutrient retention, and healthy root growth. It holds water against evaporative and gravitational loss and increases plant-available moisture and oxygen in the root zone, thereby reducing irrigation requirements and promoting the production of healthy root tissue.

Q. I have both native soil push-up greens and sand-based greens. Can I use ISOLITE®CG on both these types of greens?

A. Yes. When water comes in contact with the ISOLITE®CG granule, it acts like a sponge. It pulls in its own weight in water and will meter water and nutrients back to the turf grass slowly. Once the ISOLITE®CG granule is filled with water, it acts like a sieve, meaning it will allow excess water to drain. So, in clay-type soils, ISOLITE®CG works well to increase the percolation rate.

Q. I have other sales people tell me they have materials that are just like ISOLITE®CG, only cheaper. Should I believe them?

A. Ask them a couple of questions. Ask them what their product's internal pore space distribution is, what their products are made out of, and ask them what the application rate is for their material. The internal pore size is very important and each sales person must know the answer to this question! A porous ceramic must average more than 1 micron in order to house microorganisms that will combat pathogens. If their material is clay-based, why would you want to put clay into a green or tee? Lastly, because of its efficiency, ISOLITE®CG can often be used at a lower application rate than other material. This makes ISOLITE®CG a better value!

Q. Has ISOLITE® been tested?

A. Yes. It has both been field tested and laboratory tested? Here is a summary of results quoted from a "Physical Evaluation of ISOLITE®CG in USGA Sand Based Root-Zone Materials" prepared by Chuck Dixon in January, 1992: "The addition of ISOLITE®CG to a sand-based mix improved the bulk density and water holding capacity over the performance of unamended sand and the peat mix evaluated. The ISOLITE® was observed to improve physical attributes such as water holding, capillary pore space and bulk density in all the mixes evaluated. The water release characteristics of the ISOLITE®CG in a pure state indicated that although water is retained, much of the water will be available for plant growth. The available air-filled porosity is also important and a positive attribute of the ISOLITE®CG which may partially explain why water logged soils are responding to a product that increases water retention. The ISOLITE®CG has a large amount of pore space and its shape will have unique interactions with sand. The ISOLITE®CG has contributed favorably to the sand and sand-peat mix physical performance. Based on the physical evaluation data collected using the treatments described, the ISOLITE®CG may reduce compaction, increase water holding capacity, and provide improved air diffusion into the root zone." In the U.S., almost a decade

of use and 2 million pounds of ISOLITE®CG sold, ask the thousands of people who have used ISOLITE®CG. They will tell you of their success with the worlds best Green and Tee amendment.

Q. How do I use ISOLITE®CG, and give me some real life examples of its various uses for the golf course?

A. Okay. Here are a few:

#1 Sean Remington, Superintendent, Chevy Chase Club, Chevy Chase, MD. "Before using ISOLITE®CG, I referred to my 15th green as 'environmentally challenged.' The green sits back in a wooded area and gets little air movement or morning sunlight. The soil profile, which was amended in 1955 with a clay-based material, had a paste-like consistency when wet and became brick hard when dry. Additionally, it was covered with *Poa annua* as a result of the compacted, poorly draining soil. In 1991, I chose an aggressive approach for #15, using deep-time aerification, the Floyd McKay drill, and my Greensaire to incorporate ISOLITE®CG into the root zone. The results have been incredible. Over the last five years, #15 has been transformed from my worst to one of my best-performing greens--in any weather! The green's improvement has been noticed at every level of the club, from caddies to 30-year employees on my staff to the Golf Chairman. After my success with #15 and other test areas, I started incorporating ISOLITE®CG into my top dressing program in 1993 for all my greens...

#2 Andy Sheehan, CGCS, Kenwood Golf & Country Club, Bethesda, MD. "I first tried ISOLITE®CG in 1993 on a couple of greens that were not draining well after a heavy rain. I incorporated ISOLITE®CG at a high rate through deep-time aerification. The result has been a significant improvement in surface drainage. Now ISOLITE®CG is the cornerstone of my top dressing program. A 10% blend of ISOLITE®CG and top dressing has virtually eliminated all drainage and localized dry-spot problems. By incorporating ISOLITE®CG (850 lbs./yd.) significantly improves both root mass and depth, which in turn allows for quicker grow in. Using ISOLITE®CG is truly worthwhile insurance for success."

#3 Mark Merrick, CGCS, The Elkridge Club, Baltimore, MD. "I started with the ISOLITE®CG product as a test for one localized dry spot. I expanded my incorporation of ISOLITE®CG into all my clay and sand-based greens and have been blending ISOLITE®CG at a 10% rate into my top-dressing program for the past four years. For overall healthy turf and cost efficiency, this extruded diatomaceous product doesn't break down under any extreme circumstance. ISOLITE®CG works well in two ways with water. Drainage on 75 year old clay-based greens has been increased dramatically. With four rebuilt sand-based greens, water retention has been amazing. Side effects? Increased root zones because of pore space and reduced compaction--Cost and environmental savings on water because of better control--Less use of wetting agents--Top-dressing volume is reduced because of the particle density of the product--Better use of fertilizers and pesticides because of ISOLITE®CG 's water holding power. This product makes my job easier, gives the maintenance staff more time to work on other areas of the golf course and pleases my Club's pocketbook."

ISOLITE®CG resists compression due to traffic and will not be affected by freezing temperatures. It is an extremely stable material and will not shrink, swell, or break down in the soil. It is not a significantly charged particle (E.C. of .1 to .4 mmhos/cm), has no interaction with sodium, and in fact, helps to leach salts from the soil. In addition, ISOLITE®CG has a propensity to buffer soil temperatures.

Diatomaceous Earth-Based ISOLITE®CG will never compact and will provide a free flow of air and water indefinitely. ISOLITE®CG assures this because of its mean pore size of 1.3 microns, compared with .078 microns of fired clays, and because the shape of the ISOLITE®CG is cylindrical, not angular.