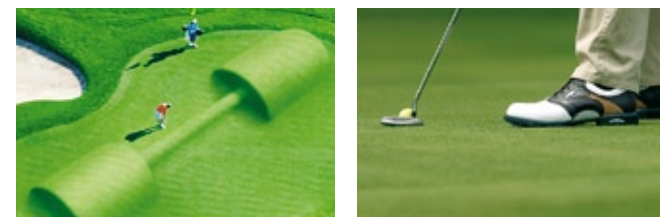


# Sierraform® GT

Slow release potassium – a body building course for your greens



## Unique slow-release potassium

Sierraform GT is an improved version of the familiar Sierraform. Its unique dual effect combines both slow-release nitrogen and slow-release potassium. The strength of slow-release potassium is that it's released throughout the effective period, whenever the grass plant needs it. Leaf analysis has shown a significant difference between Sierraform GT and fertilisers that do not contain slow-release potassium. The result is a stronger grass plant that's more resistant to cold, heat, drought and intensive wear – all year round.



## Key features and benefits

- Dual effect thanks to slow-release nitrogen and slow-release potassium
- Maintains a higher bank of 'available K' in the sand/soil profile
- Small, physically uniform granules for even spreading, quick dispersion and minimal mower pick up
- Chemically uniform NPK + TE contained in every granule
- Optimum protection against stress: cold, heat, drought and wear. Proven increased efficiency of turf water consumption
- Guaranteed even growth and even colour
- Safe to use (no scorching) and virtually no leaching
- Slow release fertiliser mechanism not affected by mechanical cultivation techniques (aeration etc.)
- Disease activity is reduced. Recovery from disease is accelerated.

## Taking the lead through innovation

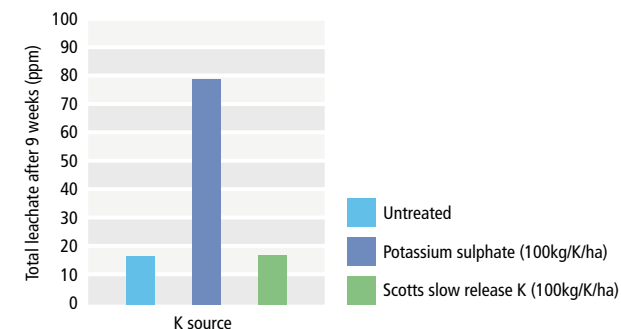
Scotts is constantly occupied with the development and improvement of its products. Scotts products give you the confidence that you are using the latest technology and that you are profiting fully from the most up-to-date insights in the field of fertilisation. Sierraform GT is a further-developed variant of Sierraform and is also based on the dosed release of nutrients. With Sierraform GT, you can choose various different analyses, all with a longevity of around eight weeks (dependent on environmental conditions).

## The complete Sierraform GT program

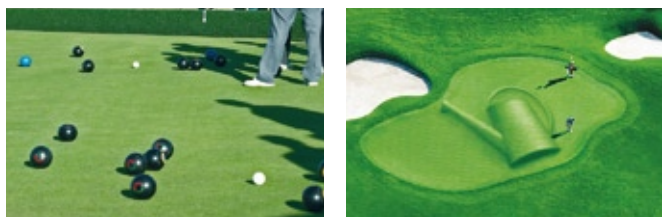
Product & Scotts code		Analysis	Mg	Cu	Fe	Mn	Mo	Zn
Spring Start 4014T	Activates spring green-up	16+0+13.3			1.0	0.3		
Momentum 4015T	Matches nutrient input during periods of strong growth	22+2.2+9.1	1.2	0.02	0.5	0.1	0.001	0.02
All season 4121T	Ensures well-balanced NK nutrients with less P	18+2.6+14.9	1.2	0.02	0.5	0.1	0.001	0.02
NK 4258T	NK fertiliser without P	19+0+15.8	1.2	0.02	0.5	0.1	0.001	0.02
Anti Stress 4105T	Optimum protection against stress	15+0+21.6			1.0			
K-step 4102T	Increased surface density and leaf turgidity	6+0+22.4	1.2	0.025	0.7	0.15	0.001	0.025
Pre Seeder 4085T	Ideal during grow-in and establishment	18+9.6+4.1						

The entire Sierraform GT range contains slow-release potassium.

## Sierraform GT minimises leaching

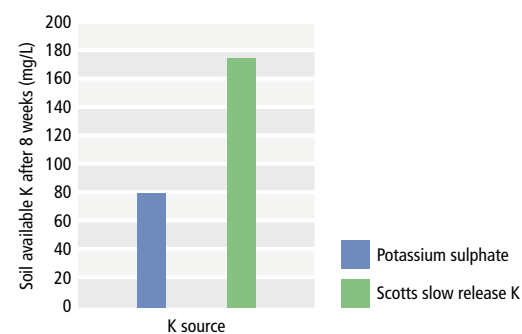


It is only recently that chemistry developments have enabled production of a slow release potassium in a plant-available form, ensuring a bank of available potassium in the soil profile for an extended time. Thus for turf professionals in the past, the application of K presented problems of leaching and raised salinity in its present form  $K_2SO_4$  particularly in low CEC profiles. Sierraform GT has solved that problem.



# Sierraform® GT

## Scotts slow release K spoon feeds fine turf



Ref: Trial No E06TFL007, Levington Research Station, UK

The slow release potassium source in Sierraform GT provides a gradual release of potassium over time. This means that potassium losses are limited in terms of leaching and luxury consumption, leaving more available K in the soil for the plant at a later date. The effect is one of spoon feeding nutrients to the turf.

### Improved drought tolerance

Potassium plays an important role in improving drought tolerance in turf plants; it enables chloroplast hydration during drought and salinity stresses and regulates transpiration.

As Sierraform GT delivers potassium in a slowly available form this extends the time span over which it can be effective for increasing stress tolerance. When potassium is delivered in a slow-release form, the plants' ability to withstand drought conditions is greatly increased.

## Maximum power in a tiny granule

Each small, uniform Sierraform GT granule (0.7-1.4mm) will contain the same analysis as on the bag. These tiny granules are easy to spread, thus ensuring that the best coverage per square metre of turf is achieved. Every grass plant on your green therefore receives exactly the same quantity of nutrients. This results in even growth with a beautiful, uniform colour. Since the smaller Sierraform GT granules are absorbed into the soil so quickly, you can mow the grass again very soon after application, and players will not experience any disruption to play.

### Safe and reliable

Since Sierraform GT has a regulated release pattern, its application is absolutely safe. There is virtually no risk of scorching, and there is practically no leaching. This is not only beneficial for the environment; it is also extremely economical. Every nutrient element in Sierraform GT reaches its intended destination: the plant.

### Salt Index

- Salt Index is important, as injury to turfgrass plants can occur when fertiliser concentrations in the soil solution or in solutions on above ground parts are high enough to cause dehydration of plant cells due to osmosis
- The Salt Index of fertilisers is a measure of the osmotic pressure created in the soil solution by the addition of fertilisers
- Salt Index is expressed as the ratio of increase in osmotic pressure produced by a given material to that produced by the same weight of sodium nitrate (which is given a Salt Index of 100).

## Salt Index of Nitrogen & Potassium sources

The slow release nitrogen (methylene urea; MU) and potassium source used in Sierraform GT has a significantly lower Salt Index compared to all other commercially available sources of nitrogen and potassium. This equates to improved safety to the turf.

### Improved uptake of Nitrogen and Magnesium

Over application of cations such as potassium can create an imbalance in the base saturation of CEC sites. This is particularly relevant immediately after fertiliser application. By supplying potassium in a slowly available manner the soil chemistry is maintained in a sustainable equilibrium. Plant uptake of nutrients such as calcium, magnesium and nitrogen can all be inhibited by too much potassium. This is especially relevant in rootzones with a high sand content.

### Improved Magnesium and Nitrogen uptake with Sierraform GT versus Sierraform

Significantly higher magnesium and nitrogen levels were found in the leaf tissue of turf treated with Sierraform GT compared with Sierraform. This highlights the benefits of maintaining the soil chemistry in equilibrium and minimising any inhibition of plant uptake caused by a rapid release of potassium.

#### ▶ Scotts Fact

Potassium plays an important role in strengthening turf plants, making them more resilient under environmental stress conditions. However over-application of K can create a chemical imbalance in the soil profile and can inhibit the uptake of nutrients such as calcium and magnesium. By supplying K in a slowly available manner the soil chemistry is maintained in sustainable equilibrium.