Turf & Landscape



2018/19 Product Guide

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Cover photo courtesy of St Mellion International Resort, Cornwall

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About Us



As part of the ICL Group, we strive to bring you the most technically advanced products and solutions

ICL provide speciality fertilizers and nutrition programmes, turf seed, plant protection products and growing media to help you meet the demands of modern-day turf and landscape management.

We take great pride in the integrity and value of our dynamic world-class product portfolios and in the provision of dedicated technical support, available to you from the team at ICL. Through our product technologies, our ongoing support of end-user education and through iTurf, our integrated turf management programme, we continue to advocate best practice in turf management and sound environmental stewardship.

With market-leading fertilizer brands – including SierrablenPlus, SierraformGT and Greenmaster – and a wealth of knowledge in both our Turf & Landscape technical teams and our network of distributors, we look forward to working with you and supporting you in all aspects of your work.

Driven by innovation

We continually invest in new products and have some of the most advanced Research and Development facilities in the world. We are also committed to sustainability, helping to maintain our environment in an efficient and responsible way.

> From raw materials through to finished product, we are dedicated to producing the finest range of fertilizer, plant protection and grass seed technologies, all backed up by first-class customer service. Turf managers at many of the world's finest sporting venues trust our technologies to help them produce high quality turf for sports and amenity use.

Inspired by nature

As well as fertilizer, plant protection products and grass seeds, ICL offers expertise and solutions to a range of turf problems, which we bring together in our unique programme of integrated turf practices and treatments.

> Integrated turf management (ITM) focuses on using the best products in the most efficient and responsible way. ICL is championing ITM through iTurf in order to provide turf managers with an easy way of meeting their environmental responsibilities and complying with increasing rules and regulations regarding chemical application. It also helps them maintain healthy turf through long-term sustainable management.





Turf Rewards

Sign up to... **Turf**

Turf Rewards is a loyalty scheme for golf, sports and amenity turf managers

"We signed up to Turf Rewards because its a great way of getting something back on the money that we spend. I can arrange for my spreaders and sprayers to be checked and calibrated and use Turf Rewards vouchers to pay for it."

Keith Porter Leigh Sports Village

With Turf Rewards we offer the chance to earn points from purchases and convert them into a range of valuable agronomic or educational items.



turfrewards.com

Turf Rewards Benefits

- Receive points every time you purchase selected products
- Redeem points for agronomic or educational items
- Improve your turf surfaces through measurement and understanding
- Help your team to gain further qualifications
- Receive exclusive benefits including seminars, workshops and networking events
- Maximise your budget with every purchase



Watch out for this symbol on qualifying ICL products and benefit from better turf "I've been using Turf Rewards since it was first launched, it makes my budget go a lot further. I'm looking at getting a Rapid Facer next as I've heard great things about it. I think Turf Rewards works for everyone at every level."

1

Peter Ashworth Preston North End FC

Turf Rewards

Turf Rewards is as easy as

"We carry out weekly moisture and firmness tests at the training ground. The Enviromonitor vouchers enabled us to purchase a range of measurement tools. It's nice to get something back for the amount of commitment you show to a particular company."

John Ledwidge Leicester FC



Sign up online



Purchase qualifying products and collect points



Log the points you've collected and claim your reward

turfrewards.com

Terms & Conditions apply See Turf Rewards brochure for full details



"We have greatly benefited from our involvement with Turf Rewards. The scheme has not only provided us with a range of quality products, but it has also enabled us to invest in educational schemes and courses for a number of our employees."

Mike Bush St. Mellion GC/Crown Golf

Turf managers across the globe trust ICL products to deliver outstanding results

Our comprehensive range of turf, amenity and landscape fertilizers provide the highest quality nutrition for turf that performs well, is healthy, resilient and looks good. Our unique, cutting edge, controlled release and slow release technologies deliver nutrients accurately and efficiently.



Fertilizers Contents

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Precision Nutrition

ICL fertilizer technologies deliver the optimum level of nutrient to support healthy turf

Conventional, controlled (coated) and slow-release technologies are all available to help you design your nutrition programmes to support the production of healthy and high quality turf.

Extensive independent trial work has repeatedly confirmed the benefits of choosing premium formulations. If you are able to deliver nutrient in the correct form with an appropriate release pattern then you will improve the sward quality, increase root mass and radically reduce the level of disease activity.

Premium Conventional Sources

We only include premium quality ingredients in our formulations.

ICL only uses urea and ammoniacal nitrogen sources (primarily from ammonium sulphate) in the Greenmaster Pro-Lite range. We deliberately avoid the use of nitrate nitrogen, which can leach easily or increase the risk of damaging disease outbreaks. At ICL all our ingredients are considered to be crucial to achieving the best results.

Nutrient Input



The choice of nutrient source is essential for effective uptake and longevity.







Fertilizer Technologies

Our nutrition delivery technology is designed to help you maximise turf performance, minimise fertilizer inputs and eliminate waste.

Poly-S

Coated granule technology. Polymer and sulphur coating regulates nitrogen release to suit plant demand.

Poly-S technology:

Outer polymer coating ______ Inner sulphur coating ______ Urea nutrient core ______

Nitrogen granules are coated first with sulphur (a plant nutrient in itself) and then a unique polymer membrane. which is degradable. Once moisture permeates this outer polymer membrane and sulphur coating, nitrogen is released. Depending on the thickness of the coating, this release can last up to 6 months. Major increases in soil temperature and/or moisture do not create severe fluctuations in this release pattern, ensuring that Poly-S provides non-surge growth and a healthy, green turf even in warm, wet conditions. Because nutrient uptake is so efficient, the risk of leaching is reduced.

PACE

Resin coated technology. Resin coating of NPK and trace elements to provide tailored release patterns.

PACE technology:

Nutrient is combined within each granule.

PACE is a controlled release technology fertilizer containing more than one nutrient. Our unique vegetable-based resin membrane ensures the plant receives a steady dose of nitrogen, potassium and phosphorus. Depending on the thickness of the coating, nutrients are released over different lengths of time from 2 - 3 months up to 8 - 9 months. When applied, pressure starts to build up within the granule, forcing nutrients through the semi-permeable vegetable-based coating. The release is not influenced by soil moisture levels, pH or bacterial activity, so remains consistent over a wide range of environmental conditions.

MU₂

Extended nitrogen release in microfine granules. Slow release nitrogen that can be incorporated with a combination of quality nutrient sources.

MU₂ technology:

SierraformGT contains the correct and most effective combination of nutrients for the grass plant. Every granule has an identical composition. The result is even growth and colour all over the entire turf area.

MU₂ technology ensures the fertilizer distributes nutrients uniformly when applied, for even and slow growth across the whole grass area, creating a dense sward and a strong rooting system.

Fertilizers containing MU₂ technology are very safe to use. They have extremely low salt levels so the turf plant can't be burnt or damaged. The result is increased longevity of up to 8 weeks (depending on environmental conditions).

SiLK

Slow release potassium. A key ingredient of premium formulations to extend potassium and silica release and minimise leaching loss.

SiLK technology:

Slow release potassium in combination with silica has been shown in trials to improve drought tolerance.



Potassium is important for water regulation, protein synthesis, storage of starch and meristematic growth in plants as well as activating enzymes. With SiLK, a larger bank of potassium remains in the root zone available for plant uptake over a period of approximately 8 weeks.

Silica improves both the structure and strength of cells, helping to protect the plant from disease. Excessive soil moisture does not affect the release mechanism.

Sierraform[®] GT

High performance long-lasting micro-granular fertilizers

SierraformGT is a high performance range, designed for use on high quality, fine turf throughout the year. Each granule contains conventional and slow-release nutrient sources for consistent and sustained release patterns.

SierraformGT Benefits

- Slow release nitrogen and potassium for consistent and sustained results
- > Even spread at ultra-low application rates
- Granules break down and disperse quickly
- Slow-release nitrogen and potassium benefits root development and stress tolerance

Product Performance*

Granule dispersal: 2 - 3 days Turf response: 7 days Longevity: 6 - 8 weeks *depending on environmental factors



The Complete SierraformGT Range

| Product Name Oxide Analysis (Elemental Analysis) | Product Notes | NU | trient Brea Nitroge | | | | |
|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------|------------------------|-------------------|--|--|--|
| | | | | | | | |
| | | Total N | N-NO₃ | N-NH ₄ | | | |
| Spring Start 16-0-16 +Fe +Mn (16-0-13.3 +Fe +Mn) | Quick reaction in cooler conditions, ideal for spring application. | 16 | | 7.9 | | | |
| Momentum 22-5-11 +2MgO +TE (22-2.2-9.1 +1.2Mg +TE) | For use in spring and summer, with magnesium and TE for turf colour. | 22 | 3 | | | | |
| All Season 18-6-18 +2MgO +TE (18-2.6-14.9 +1.2Mg +TE) | Ideal for use after aeration to stimulate root growth. | 18 | | 1.3 | | | |
| NK 19-0-19 +2MgO +TE (19-0-15.8 +1.2Mg +TE) | Balanced NK fertilizer for use from spring to autumn. | 19 | | | | | |
| Anti-Stress 15-0-26 +Fe (15-0-21.5 +Fe) | High potassium content to harden turf in stressful summer or autumn conditions. | 15 | | | | | |
| K-STEP 6-0-27 +2 MgO + TE (6-0-22.4 +1.2Mg +TE) | High potassium content to harden turf in autumn and winter. | 6 | | 0.7 | | | |
| Pre-Seeder 18-22-5 (18-9.6-4.1) | Ideal for use during over-seeding period or when laying turf. | 18 | 18 | | | | |



Nutrient Breakdown

| The Delivery of Nitrogen |
|--------------------------|
| for Consistent Release |

Nitrogen Release in SierraformGT



Nitrogen Content in SierraformGT



For further information contact your ICL Technical Area Sales Manager or visit www.icl-sf.co.uk | www.icl-sf.ie

Bag Sizes Rate (g/m²) Applied (kg/ha) per m² (kg) Nitrogen Total Total 20kg Bag S N-Urea N-MU₂ Ρ Κ MgO Ν Ρ Κ F M А Μ А OND 32.0 0.0 32.0 1,000 20 2.4 5.7 16 20 25 40.0 0.0 40.0 800 30 48.0 0.0 48.0 667 20 44.0 10.0 22.0 1,000 25 13.0 28.0 7.5 11.5 5 2 20 55.0 800 11 30 66.0 15.0 33.0 667 20 36.0 12.0 36.0 1,000 25 15.0 45.0 2 20 45.0 8.2 8.5 6 18 800 30 54.0 18.0 54.0 667 0.0 38.0 20 38.0 1,000 9.9 9.1 19 20 25 48.0 0.0 48.0 800 2 30 57.0 0.0 57.0 667 52.0 20 30.0 0.0 1,000 7.2 7.8 26 20 25 38.0 0.0 65.0 800 30 45.0 0.0 78.0 667 0.0 54.0 1,000 20 12.0 5.3 27 2 20 25 15.0 0.0 68.0 800 30 0.0 81.0 18.0 667 10.0 1,000 20 36.0 44.0 20 25 45.0 55.0 12.5 2.7 8.9 22 5 800 30 54.0 66.0 15.0 667

Application Nutrient Levels Bag Coverage

Recommended Period of Use

Spreader Settings

| | | | preader AccuPro 2000) | |
|----------------|--------------|-----------------|---------------------------------|----------------------------|
| Rate (g/m²) | Cone Setting | Spread Width | Single Pass @ Full Rate | Double Pass @ Half Rate |
| 20 | 6 | 3.7m | L | l ½ |
| 25 | 6 | 3.7m | М | J ½ |
| 30 | 6 | 3.7m | M ½ | К |

Greenmaster Pro-Lite

Outstanding micro-granular fertilizer range for high quality, fine turf nutrition

A conventional release, finely granulated homogeneous fertilizer for use on fine turf areas. The range contains various analyses designed to optimise turf health throughout the year.

Greenmaster Pro-Lite Benefits

- The micro-granule formulation allows consistent distribution, even at low rates of application
- High quality ingredients provide reliable release patterns
- Contains zeolite to improve performance and longevity
- Greenmaster Autumn provides moss control

Product Performance*

Granule dispersal: 3 - 4 days Turf response: within 7 days Longevity: 6 weeks *depending on environmental factors



The Complete Greenmaster Pro-Lite Range

| Product Name | Product Notes | | | |
|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|---------|-------------------|--|
| Oxide Analysis (Elemental Analysis) | | Nitr | ogen | |
| | | | | |
| | | Total N | N-NH ₄ | |
| Turf Tonic 8-0-0 +3MgO +Fe <i>(8-0-0 +1.8Mg +Fe)</i> | Works well at low temperatures to boost early season growth. | 8 | 4.5 | |
| Invigorator 4-0-8 +2MgO +4Fe (4-0-6.6 +1.2Mg +4Fe) | Low nitrogen, high potassium with iron to help harden turf in spring and autumn. | 4 | 4 | |
| Invigorator Plus 4-0-14 +2MgO +8Fe (4-0-11 +1.2Mg +8Fe) | Higher potassium and iron formulation to sustain turf health in autumn and spring with improved colour response. | 4 | 4 | |
| Cold Start 11-5-5 +8Fe (11-2.2-4.1 +8Fe) | Readily available nitrogen, phosphorus and potassium to kick-start spring recovery growth. | 11 | 5.6 | |
| Spring & Summer 14-5-10 +2MgO (14-2.2-8.3 +1.2Mg) | Maintains strong growth levels and enhances turf colour during the spring and summer. | 14 | 5.1 | |
| NK 12-0-12 +3MgO +2Fe (12-0-10.0 +1.8Mg +2Fe) | Ideal for use from spring through to late summer to maintain potassium levels. | 12 | 4.1 | |
| Double K 7-0-14 +4Fe (7-0-11.6 +4Fe) | Low nitrogen high potassium for turf strengthening throughout the year. | 7 | 2.8 | |
| Autumn 6-5-10 +6Fe (6-2.2-8.3 +6Fe) MAPP No 16762 / PCS No 05004 | NPK analysis with high iron to balance turf health, harden the sward and provide moss control. | 6 | 4.3 | |
| Autumn Mg 6-5-11 +3MgO +0.5Fe (6-2.2-9.1 +1.8Mg +0.5Fe) | Low iron NPK analysis formulated with magnesium to enhance turf health and colour. | 6 | 1.8 | |
| Pro-Iron 0-0-0 +7Fe +3MgO +seaweed (0-0-0 +7%Fe +1.8Mg + seaweed) | Provides quick green-up with minimal growth, especially useful in autumn and winter. | | | |



| | Nutrient | t Break | down | | | Bag Sizes | Application Rate | Nutr Appl | ient L | evels g/ha) | a) Coverage | | | | | | | Jse | | | | | |
|--------|-------------------|------------|------------|-----|-----|--------------|---------------------|--------------|--------------|--------------------|-------------|---|---|---|---|---|---|-----|---|---|---|---|---|
| Nitro | gen | | | | | (kg) | (g/m²) | | | per m ² | | | | | | | | | | | | | |
| N-Urea | N-MU ₂ | Total P | Total K | MgO | Fe | | | N | Р | К | 25kg Bag | J | F | М | А | М | J | J | А | S | 0 | N | D |
| 3.5 | | | | 3.3 | 3 | 25 | 30 35 | 24.0 28.0 | 0.0 0.0 | 0.0 0.0 | 833 714 | | | | | | | | | | | | |
| | | | 8 | 3.3 | 4 | 25 | 30 35 | 12.0 14.0 | 0.0 0.0 | 24.0 28.0 | 833 714 | | | | | | | | | | | | |
| | | | 14 | | 8 | 25 | 30 35 | 12.0 14.0 | 0.0 0.0 | 42.0 49.0 | 833 714 | | | | | | | | | | | | |
| 5.4 | | 5 | 5 | | 8 | 25 | 30 35 | 33.0 38.5 | 15.0 17.5 | 15.0 17.5 | 833 714 | | | | | | | | | | | | |
| 8.9 | | 5 | 10 | 2 | | 25 | 30 35 | 42.0 49.0 | 15.0 17.5 | 30.0 35.0 | 833 714 | | | | | | | | | | | | |
| 7.9 | | | 12 | 3 | 2 | 25 | 30 35 | 36.0 42.0 | 0.0 0.0 | 36.0 42.0 | 833 714 | | | | | | | | | | | | |
| 4.2 | | | 14 | | 4 | 25 | 30 35 | 21.0 24.5 | 0.0 0.0 | 42.0 49.0 | 833 714 | | | | | | | | | | | | |
| 1.7 | | 5 | 10 | | 6 | 25 | 30 35 | 18.0 21.0 | 15.0 17.5 | 30.0 35.0 | 833 714 | | | | | | | | | | | | |
| 0.2 | 4.0 | 5 | 11 | 3 | 0.5 | 25 | 30 35 | 18.0 21.0 | 15.0 17.5 | 33.0 38.5 | 833 714 | | | | | | | | | | | | |
| | | | | 3 | 7 | 25 | 30 35 | 0.0 0.0 | 0.0 0.0 | 0.0 0.0 | 833 714 | | | | | | | | | | | | |

Spreader Settings

| | (A | AccuPi | | preader 2000, SR-1 | I, R8-/ | 4) | | | | |
|--------------------------|--------------|--------|-------------------|------------------------------|---------|----------------------------|--|--|--|--|
| Rate (g/m ²) | Cone Setting | Spre | ad Width | Single Pa @ Full Ra | | Double Pass @ Half Rate | | | | |
| 30 | 6 | | 3.7m | М | | J ½ | | | | |
| 35 | 6 | | 3.7m | Ν | | К | | | | |
| | | | Drop Sp (SS-1, | | | | | | | |
| Rate (g/m ²) | Spread Widt | h | Single @ Ful | | | Oouble Pass @ Half Rate | | | | |
| 30 | 0.91m | | 5 | 1⁄4 | 4 | | | | | |
| 35 | 0.91m | | 5 | 1⁄2 | 4 1⁄4 | | | | | |

Nitrogen Content



STEP[®] Hi-Mag

Unique granular trace element supplement

Contains all the micronutrients required for healthy turf growth. Especially useful for preventing deficiencies in sand-based constructions.

STEP Hi-Mag Benefits

- Helps prevent nutrient deficiencies in sand-based constructions
- Contains a high proportion of magnesium to enhance turf health and colour
- Proven benefits against the development of Take-all Patch
- > Extremely low rate of application required

Product Performance*

Granule dispersal: 4 - 5 days Turf response: 7 days Longevity: 6 weeks *depending on environmental factors



STEP Hi-Mag

| Product Name | Product Notes | Nutrient Breakdo | | |
|--------------|----------------------------------------------------------------------------------------|---------------------|------|--|
| | | MgO | Cu | |
| STEP Hi-Mag | Prevents trace element deficiencies and contains magnesium for turf health and colour. | 19.8 | 0.50 | |





| Nutrier | nt Breakdo | own | Bag Sizes (kg) | Application Rate (g/m²) | | | | | | Bag Coverage per m ² | | | F | Reco | mm | ende | ed Pe | eriod | ofL | lse | | |
|---------|------------|-----|----------------------|-------------------------------|-----------------|------------|------------|------------|------------|---------------------------------------|---|---|---|------|----|------|-------|-------|-----|-----|---|---|
| Fe | Mn | Zn | | | MgO Cu Fe Mn Zn | | | | | 20kg Bag | J | F | М | A | М | J | J | А | S | 0 | N | D |
| 8 | 3 | 1 | 20 | 7 11 | 13.9 21.9 | 0.4 0.6 | 5.6 8.8 | 2.1 3.3 | 0.7 1.1 | 2,857 1,818 | | | | | | | | | | | | |



Spreader Settings

| | (4 | Rotary S AccuPro 2000, SR | | ۹) |
|--------------------------|--------------|-------------------------------------|----------------------------|----------------------------|
| Rate (g/m ²) | Cone Setting | Spread Width | Single Pass @ Full Rate | Double Pass @ Half Rate |
| 5 | 7 | 4.3m | Н | G ½ |
| 10 | 7 | 4.3m | l ½ | Н |
| 15 | 7 | 4.3m | К | I |

Take-All Patch Trial



Trace Elements For Managing Disease More Effectively



STEP Hi-Mag is proven to reduce disease pressure in turf when used as part of an iTurf programme. Manganese plays an important role in managing Take-all Patch disease and, when used efficiently, helps to minimise its occurrence.

An STRI trial showed that by combining the high Manganese contained in STEP Hi-Mag with a slow release SierraformGT programme, Take-all Patch level is maintained at an acceptable level of under 2% cover.

Sierrablen[®] Plus

Premium technology controlled release mini-prill fertilizers

Contains Poly-S and resin-coated PACE technology with conventional nitrogen sources to provide the best long-term nutrient release patterns.

SierrablenPlus Benefits

- The mini-granular formulation allows even coverage at low rates
- 3+ month, 3 4 month and 5+ month longevities available
- Extremely cost-effective at low application rates



Product Performance*

Granule dispersal: 7 days (visually dispersed from surface) Turf response: 7 days Longevity: 3+ months, 3 - 4 months and 5+ months *depending on environmental factors



The Complete SierrablenPlus Range

| Product Name Oxide Analysis (Elemental Analysis) | Technology/ Longevity | Product Notes |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| 38-0-0 (3+ Months) (38-0-0) | Name and a state of the state o | Controlled release nitrogen matches plant requirements to give continuous growth for over 3 months. |
| Spring Starter (3+ Months) 24-5-13 (24-2.2-10.8) | New Receipt B | Encourages healthy balanced growth at the start of the season. |
| Active (3+ Months) 19-5-18 +2MgO +TE (19-2.2-14.9 +1.2Mg) | Poly-S | Full trace element package to enhance turf health plus magnesium to improve turf colour. |
| Stress Control (3+ Months) 15-0-28 +2MgO (15-0-23.2 +1.2Mg) | Nie Bi | High potassium content strengthens cell walls and aids water regulation in plant. |
| 0-0-39 (3 - 4 Months) (0-0-32.4) | NPK 3-4 | Ideal controlled release potassium fertilizer for hardening turf coming into winter. |
| Spring Starter (5+ Months) 24-5-8 +2MgO (24-2.2-6.6 +1.2Mg) | Poly-S PACE | Spring Starter fertilizer with nutrients delivered for over 5 months to encourage healthy balanced turf growth. |
| Active (5+ Months) 18-5-18 +2MgO (18-2.2-14.9 +1.2Mg) | NAME DECEMBER 1 | Balanced NK fertilizer with phosphorus for use from spring to autumn. Magnesium content helps to improve turf colour. |
| Stress Control (5+ Months) 15-5-22 +2MgO (15-2.2-18.3 +1.2Mg) | NIN REF 5 | Classic turf hardener formulation, ideal for year-round use. |
| Spring & Summer CalMag 23-0-5 +2CaO +2MgO (23-0-4.1 +1.4Ca +1.2Mg) | Neoly-S 4-5 | Long-lasting nutrient release containing polyhalite for added calcium and magnesium. |



| | | Nutri | ent Brea | kdown | | | Bag Sizes | Application Rate | | rient Le lied (kg | | Bag Coverage | | | Re | com | nme | ende | ed P | eric | o bd | fUs | e | |
|--------------------------|-------------------|-------------------|----------|--------------------------|--------------------------|-----|--------------|----------------------|-------------------------------|------------------------------|------------------------------|--------------------------|---|---|----|-----|-----|------|------|------|------|-----|---|---|
| | Nitro | ogen | | | | | (kg) | (g/m ²) | | | -, | per m ² | | | | | | | | | | | | |
| Total N (% Coated) | N-NO ₃ | N-NH ₄ | N-Urea | Total P (% Coated) | Total K (% Coated) | MgO | | | N | Р | к | 25kg Bag | J | F | м | A | М | J | J | A | s | 0 | N | D |
| 38 (100%) | | | 38 | | | | 20 | 15 20 | 57.0 76.0 | 0.0 0.0 | 0.0 0.0 | 1,333 1,000 | | | | | | | | | | | | |
| 24 (79%) | 2 | 3 | 19 | 5 | 13 (27%) | | 25 | 25 30 35 | 60.0 72.0 84.0 | 12.5 15.0 17.5 | 32.5 39.0 45.5 | 1,000 833 714 | | | | | | | | | | | | |
| 19 (95%) | | 1 | 18 | 5 | 18 | 2 | 25 | 25 30 35 | 47.5 57.0 66.5 | 12.5 15.0 17.5 | 45.0 54.0 63.0 | 1,000 833 714 | | | | | | | | | | | | |
| 15 (100%) | | | 15 | | 28 | 2 | 25 | 25 30 35 | 37.5 45.0 52.5 | 0.0 0.0 0.0 | 70.0 84.0 98.0 | 1,000 833 714 | | | | | | | | | | | | |
| | | | | | 39 (100%) | | 25 | 20 25 30 | 0.0 0.0 0.0 | 0.0 0.0 0.0 | 78.0 97.5 117.0 | 1,250 1,000 833 | | | | | | | | | | | | |
| 24 (80%) | 6 | 7 | 11 | 5 (45%) | 8 (65%) | 2 | 25 | 30 35 40 45 | 72.0 84.0 96.0 108.0 | 15.0 17.5 20.0 22.5 | 24.0 28.0 32.0 36.0 | 833 714 625 556 | | | | | | | | | | | | |
| 18 (74%) | 4 | 5 | 9 | 5 (35%) | 18 (17%) | 2 | 25 | 30 35 40 45 | 54.0 63.0 72.0 81.0 | 15.0 17.5 20.0 22.5 | 54.0 63.0 72.0 22.5 | 833 714 625 556 | | | | | | | | | | | | |
| 15 (69%) | 3.5 | 4.5 | 7 | 5 (35%) | 22 (12%) | 2 | 25 | 30 35 40 45 | 45.0 52.5 60.0 67.5 | 15.0 17.5 20.0 22.5 | 66.0 77.0 88.0 99.0 | 833 714 625 556 | | | | | | | | | | | | |
| 23 (73%) | | | 23 | | 5 | 2 | 25 | 25 30 35 | 57.5 69.0 80.5 | 0.0 0.0 0.0 | 12.5 15.0 17.5 | 1,000 833 714 | | | | | | | | | | | | |

Spreader Settings

| | (4 | | preader R-2000, SR-1, R8- <i>i</i> | ۹) |
|--------------------------|--------------|--------------|----------------------------------------------|----------------------------|
| Rate (g/m ²) | Cone Setting | Spread Width | Single Pass @ Full Rate | Double Pass @ Half Rate |
| 25 | 4 | 4.8m | 0 | L |
| 30 | 4 | 4.8m | Р | М |
| 35 | 4 | 4.8m | R | M 1⁄2 |
| 40 | 4 | 4.8m | S | Ν |
| 45 | 4 | 4.8m | Т | N 1⁄2 |

Nitrogen Content in SierrablenPlus



Sierrablen®

Premium quality controlled release fertilizers for use on tees and outfields

Contains Poly-S and resin-coated controlled release fertilizer granules. The coating technology provides product longevity to suit individual requirements.

Sierrablen Benefits

- Long-standing brand with proven performance in various climatic conditions
- Coated granules provide extended longevity for up to 8 - 9 months
- Provides a consistent nutrient release pattern that reduces leaching

Product Performance*

Granule dispersal: 10 days (visually dispersed from surface) Turf response: 10 days Longevity: 4 - 5, 5 - 6 and 8 - 9 months *depending on environmental factors



The Complete Sierrablen Range

| Product Name Oxide Analysis (Elemental Analysis) | Technology/ Longevity | Product Notes | |
|--------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------|--|
| 38-0-0 (38-0-0) | Notes 4-5 | Controlled release nitrogen matches plant requirements to give continuous growth over 4 - 5 months. | |
| 23-0-5 (23-0-4.1) | Nely-S | Mini granular NK fertilizer for general use. | |
| 28-5-5 +Fe (28-2.2-4.1 +Fe) | NOR POLY-S | Contains controlled release NPK with readily available nitrogen for response at low temperatures. | |
| 27-5-5 +Fe (27-2.2-4.1 +Fe) | Poly-S PACE 8-9 | A one application per season, NPK fertilizer. | |





| Nutrient Nitrogen Total N(% N- N- N- | | | | Break | down | | | Bag Sizes | Application Rate | | rient Le lied (kg | | Bag Coverage | | | Re | com | me | nde | d Pe | erio | d of | Use | 5 | |
|-----------------------------------------------|-----------|-----------|------------|-----------|--------------------------|--------------------------|-----|--------------|----------------------|----------------------------------|--------------------------|--------------------------|--------------------------|---|---|----|-----|----|-----|------|------|------|-----|---|---|
| | Nit | rogen | | | | | | (kg) | (g/m ²) | Лрр | iicu (Kg | 5/110) | per m ² | | | | | | | | | | | | |
| | N- NO₃ | N- NH4 | N- Urea | N- MU2 | Total P (% Coated) | Total K (% Coated) | Fe | | | N | Ρ | К | 25kg Bag | J | F | М | A | М | J | J | A | S | 0 | N | D |
| 38 (100%) | | | 38 | | | | | 20 | 30 35 40 45 | 114.0 133.0 152.0 171.0 | 0.0 0.0 0.0 0.0 | 0.0 0.0 0.0 0.0 | 667 571 500 444 | | | | | | | | | | | | |
| 23 | | | | | | 5 (100%) | | 25 | 35 45 | 80.5 103.0 | 0.0 0.0 | 17.5 22.5 | 714 556 | | | | | | | | | | | | |
| 28 (98%) | 3.9 | 4.9 | 19.2 | | 5 (55%) | 5 (100%) | 0.5 | 25 | 35 45 55 | 98.0 126.0 154.0 | 17.5 22.5 27.5 | 17.5 22.5 27.5 | 714 556 455 | | | | | | | | | | | | |
| 27 (98%) | 4 | 5 | 18 | | 5 (55%) | 5 (100%) | 0.5 | 25 | 40 50 60 | 108.0 135.0 162.0 | 20.0 25.0 30.0 | 20.0 25.0 30.0 | 625 500 417 | | | | | | | | | | | | |



Spreader Settings

| | (/ | | preader R-2000, SR-1, R8-7 | ۹) |
|--------------------------|--------------|--------------|--------------------------------------|----------------------------|
| Rate (g/m ²) | Cone Setting | Spread Width | Single Pass @ Full Rate | Double Pass @ Half Rate |
| 30 | 4 | 4.7m | R ½ | Ν |
| 35 | 4 | 4.7m | T ½ | 0 |
| 40 | 4 | 4.7m | V | O ½ |
| 45 | 4 | 4.7m | Х | Р |
| 50 | 4 | 4.7m | n/a | Q |
| 55 | 4 | 4.7m | n/a | R |
| 60 | 4 | 4.7m | n/a | R 1⁄2 |

Turf Quality, 5 Months After Application

STRI





Not all controlled release fertilizers are the same. The quality of the coating used and

the percentage of nutrients that are coated all affect a fertilizer's reliability and performance. An STRI trial showed that Sierrablen 38-0-0 with 4 - 5 month longevity delivered superior turf quality with less nitrogen and at a lower application rate than a competitor 28-0-0, 5 months longevity product.

ProTurf®

High impact fertilizers for tees, surrounds, fairways, sportsfields and lawns

A range of high-quality, blended fertilizers with controlled release technology. They are formulated to give a strong immediate response, combined with 2 - 3 month longevity.

ProTurf Benefits

- Quick release portion gives immediate response
- Controlled nutrient delivery sustains growth for 2 3 months
- High quality blend in a cost-effective formulation
- > Contains polyhalite (with K, Mg and Ca)

Product Performance*

Granule dispersal: 8 days (visually dispersed from surface) Turf response: 7 days Longevity: 2 - 3 months *depending on environmental factors



The Complete ProTurf Range

| Product Name Oxide Analysis (Elemental Analysis) | Technology/ Longevity | Product Notes | |
|---------------------------------------------------------------|--------------------------|--------------------------------------------------------------------------------------|--|
| 20-0-7 +3CaO +3MgO (20-0-5.8 +2.1Ca +1.8Mg) | N. 2-3 | Strong intial boost coupled with longevity. Ideal for in-season applications. | |
| 15-5-15 +2CaO +2MgO (15-2.2-12.4 + 1.2Mg + 1.4Ca) | Ner 2-3 | Superior colour response and sward density improvement. | |
| 21-5-6 +2.5CaO +2.5MgO (21-2.2-4.3 + 2.1Ca + 1.5Mg) | N. 2-3 | Instant colour response and growth boost for long-lasting turf quality. | |
| 12-5-20 +2CaO +2MgO (12-2.2-16.6 +1.4Ca +1.2Mg) | Network 2-3 | Designed to sustain, strengthen and harden turf through the autumn and winter. | |
| | | | |



| | | Nutrie | ent Brea | kdow | n | | | Bag Sizes | Application Rate | | ient Le ied (kg | | Bag Coverage | | | Re | con | nme | nde | d Pe | erio | d of | Use | | |
|--------------------------|-------|-------------------|----------|------------|------------|-----|-----|--------------|----------------------|------------------------------|------------------------------|------------------------------|------------------------------|---|---|----|-----|-----|-----|------|------|------|-----|---|---|
| | Nitro | ogen | | | | | | (kg) | (g/m ²) | Ahh | | ,/110) | per m ² | | | | | | | | | | | | |
| Total N (% Coated) | N-NO₃ | N-NH ₄ | N-Urea | Total P | Total K | CaO | MgO | | | N | Р | K | 25kg Bag | J | F | М | A | М | J | J | А | S | 0 | N | D |
| 20 (25%) | | | 20 | | 7 | 3 | 3 | 25 500 | 20 25 30 35 | 40.0 50.0 60.0 70.0 | 0.0 0.0 0.0 0.0 | 14.0 17.5 21.0 24.5 | 1,250 1,000 833 714 | | | | | | | | | | | | |
| 15 (25%) | | 1.3 | 13.7 | 5 | 15 | 2 | 2 | 25 | 20 25 30 35 | 30.0 37.5 45.0 52.5 | 4.4 5.5 6.6 7.7 | 30.0 37.5 45.0 52.5 | 1,250 1,000 833 714 | | | | | | | | | | | | |
| 21 (25%) | | 1.3 | 19.7 | 5 | 6 | 2.5 | 2.5 | 25 | 20 25 30 35 | 42.0 52.5 63.0 73.5 | 4.4 5.5 6.6 7.7 | 12.0 15.0 18.0 21.0 | 1,250 1,000 833 714 | | | | | | | | | | | | |
| 12 (25%) | | 1.3 | 10.7 | 5 | 20 | 2 | 2 | 25 | 20 25 30 35 | 24.0 30.0 36.0 42.0 | 10.0 12.5 15.0 17.5 | 40.0 50.0 60.0 70.0 | 1,250 1,000 833 714 | | | | | | | | | | | | |



Spreader Settings

| | Rotary Spreader (SR-2000 or AccuPro 2000) | | | | | | | | | | | | |
|----------------|-----------------------------------------------------|--------------|----------------------------|----------------------------|--|--|--|--|--|--|--|--|--|
| Rate (g/m²) | Cone Setting | Spread Width | Single Pass @ Full Rate | Double Pass @ Half Rate | | | | | | | | | |
| 20 | 6 | 5.0m | N ½ | K ½ | | | | | | | | | |
| 25 | 6 | 5.0m | O ½ | L | | | | | | | | | |
| 30 | 6 | 5.0m | Р | М | | | | | | | | | |
| 35 | 6 | 5.0m | Q 1⁄2 | Ν | | | | | | | | | |

Explaining Polyhalite

Polyhalite is a component part of the ProTurf range. Polyhalite is a new naturally occurring mineral fertilizer containing potassium, magnesium and calcium. Deposited over 200 million years ago it is a complex crystal product that has been discovered at a depth of 1300 metres in the Cleveland Potash mine in the UK. Polyhalite is an exciting new addition to our fertilizer portfolio.

Extensive trial work has confirmed that the principal nutrients of potash, magnesium and calcium in polyhalite are fully available to the plant, performing in trials with the same plant-efficiency as standard individual sources of potassium and magnesium sulphate.



ICL Group Boulby Mine (Cleveland, UK), source of multi-nutrient compound



Sportsmaster[®]

High quality mini-granular fertilizer range for sports and amenity turf

The industry-standard fertilizer for turf mown above 6mm. The various analyses are designed to maintain turf performance throughout the year.

Sportsmaster Benefits

- High quality ingredients within each granule
- Uniformity of mini-granule allows even spreading at low rates
- Quick breakdown of granule for fast response

Product Performance*

Granule dispersal: 4 - 5 days Turf response: 7 days Longevity: 6 weeks *depending on environmental factors



The Sportsmaster Range

| Product Name Oxide Analysis (Elemental Analysis) | Product Notes | |
|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|--|
| Fairway 12-6-9 +3MgO (12-2.6-7.5 +1.8Mg) | Ideal for use during spring and summer periods when grass is growing strongly. | |
| NK 12-0-9 +Fe (12-0-7.5 +Fe) | The NK analysis is ideal for spring and summer periods. | |
| Spring & Summer 9-7-7 (9-3.1-5.8) | All-rounder that breaks down quickly to give rapid uptake of nutrients. | |
| Autumn 4-12-12 (4-5.2-10.0) | Ideally used to strengthen turf in autumn or when turf needs pre-stress conditioning. | |
| Pre-Seeder 8-12-8 +3MgO (8-5.2-6.6 +1.8Mg) | High phosphorus analysis to enhance seed establishment and to improve rooting. | |
| Renovator Pro 14-0-5 +Fe +Herbicide (<i>14-0-4.1 +Fe +Herb</i>) MAPP No 16803 / PCS No 02512 | Weed, feed and mosskiller maintains growth and contains a selective herbicide for weed control plus iron for moss control. | |
| Cleanrun Pro 14+0+5 +Herbicide (14+0+4.1 +Herb) MAPP No 15828 / PCS No 92260 | Weed and feed single application in spring or summer periods when broad-leaved weeds are present. | |



| | | Nutr | ient Bre | akdov | wn | | | Bag Sizes | Application Rate | | rient Le lied (kg | | Bag Coverage | | Recommended Period of Use | | | | | | | | | | |
|------------|-------------------|--------|----------|------------|------------|-----|----|--------------|----------------------|------------------------------|------------------------------|------------------------------|--------------------------|---|---------------------------|---|---|---|---|---|---|---|---|---|---|
| | Nitr | ogen | | | | | | (kg) | (g/m²) | | | | per m ² | | | | | | | | | | | | |
| Total N | N-NH ₄ | N-Urea | Organic | Total P | Total K | MgO | Fe | | | N | Ρ | к | 25kg Bag | J | F | М | A | М | J | J | A | S | 0 | N | D |
| 12 | 6.2 | 5.8 | | 6 | 9 | 3 | | 25 | 35 40 45 50 | 42.0 48.0 54.0 60.0 | 21.0 24.0 27.0 30.0 | 31.5 36.0 40.5 45.0 | 714 625 556 500 | | | | | | | | | | | | |
| 12 | 12 | | | | 9 | | 1 | 25 | 35 40 45 50 | 42.0 48.0 54.0 60.0 | 0.0 0.0 0.0 0.0 | 31.5 36.0 40.5 45.0 | 714 625 556 500 | | | | | | | | | | | | |
| 9 | 9 | | | 7 | 7 | | | 25 | 35 50 60 70 | 31.5 45.0 54.0 63.0 | 24.5 35.0 42.0 49.0 | 24.5 35.0 42.0 49.0 | 714 500 417 357 | | | | | | | | | | | | |
| 4 | 4 | | | 12 | 12 | | | 25 | 35 50 60 70 | 14.0 20.0 24.0 28.0 | 42.0 60.0 72.0 84.0 | 60.0 72.0 | 714 500 417 357 | | | | | | | | | | | | |
| 8 | 8 | | | 12 | 8 | 3 | | 25 | 30 45 50 | 24.0 36.0 40.0 | 36.0 54.0 60.0 | 36.0 | 833 556 500 | | | | | | | | | | | | |
| 14 | 10.9 | 3.1 | | | 5 | | 6 | 25 | 35 | 35.0 | 7.0 | 14.0 | 714 | | | | | | | | | | | | |
| 14 | 5.8 | 8.2 | | | 5 | | | 25 | 35 | 35.0 | 7.0 | 14.0 | 714 | | | | | | | | | | | | |

Spreader Settings

| | Rotary Spreader Drop Spreade (AccuPro 2000, SR-2000, SR-1, R8-A) (SS-1, SS-2) | | | | | | | | | | | | |
|----------------|---------------------------------------------------------------------------------|-----------------|----------------------------|----------------------------|-----------------|----------------------------|----------------------------|--|--|--|--|--|--|
| Rate (g/m²) | Cone Setting | Spread Width | Single Pass @ Full Rate | Double Pass @ Half Rate | Spread Width | Single Pass @ Full Rate | Double Pass @ Half Rate | | | | | | |
| | | | S | portsmaster | | | | | | | | | |
| 35 | 4 | 3.7m | P ½ | L 1⁄2 | 0.91m | 6 | 4 1⁄2 | | | | | | |
| 40 | 4 | 3.7m | Q | М | 0.91m | 6 ¼ | 4 ¾ | | | | | | |
| 45 | 4 | 3.7m | R | M ½ | 0.91m | 6 3⁄4 | 5 | | | | | | |
| | | | Sport | smaster Org | anic | | | | | | | | |
| 35 | 3 | 5.5m | V | Р | 0.91m | 9 | 5 ½ | | | | | | |
| 40 | 3 | 5.5m | Х | Q | 0.91m | 10 | 6 | | | | | | |
| 45 | 3 | 5.5m | n/a | R | 0.91m | 11 | 6 ½ | | | | | | |

Nitrogen Content

Ammoniacal nitrogen

📕 Urea nitrogen

Organic nitrogen



Sportsmaster[®] CRF Mini

A combination of controlled and conventional release technology

The Sportsmaster CRF Mini range contains a combination of controlled release technology with conventional granular fertilizers to provide a consistent growth response for up to 3 months.

Sportsmaster CRF Mini Benefits

- Mini-granular premium fertilizer for use on a wide range of turf types
- Polyhalite included for enhanced performance
- Controlled nutrient delivery sustains growth for up to 3 months
- Quick start nitrogen sources

Product Performance*

Granule dispersal: 8 days (visually dispersed from surface) Turf response: 7 days Longevity: 2 - 3 months *depending on environmental factors



The Complete Sportsmaster CRF Mini Range

| Product Name Oxide Analysis (Elemental Analysis) | Technology/ Longevity | Product Notes |
|---------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------|
| High N 24-5-11 (24-2.2-9.1) | 2-3 | Ideal first controlled release fertilizer application of the season. Quick reaction in cooler conditions. |
| Spring Starter 20-5-10+2MgO (20-2.2-8.3+1.2Mg) | 2-3 | Ideal for use as an early season boost and will sustain turf health through the growing season. |
| Start 19-19-5 +2MgO +TE (19-8.3-4.1 +1.2Mg +TE) | 2-3 | Ideal for use when over-seeding or laying down new turf. Note does not contain polyhalite. |
| Active 15-5-15+2CaO+2MgO (15-2.2-17.4 +1.4Ca +1.2Mg) | 2-3 | Ideal for pre-stress conditioning. |
| Stress Control 10-5-21+2CaO+2MgO (10-2.2-17.4 +1.4Ca +1.2Mg) | 2-3 | Designed to sustain turf health during autumn and winter and aid recovery after periods of stress. |





| | Nut | trient E | Break | down | 1 | | | | | ient Le | | Bag Coverage | e Recommended Period of Use | | | | | | | | | | | |
|--------------------|-------------------|----------|-------|------------|-----|-----|--------------|----------------------|------------------------------|------------------------------|------------------------------|--------------------|-----------------------------|---|---|---|---|------|------|---|-----|------|---|---|
| Total | Nitro | ogen | | | | | Bag Sizes | Application Rate | Арр | ied (kg | g/na) | per m ² | | | | | | enac | .urc | | 010 | ,,,, | | |
| N (% Coated) | N-NH ₄ | N-Urea | | Total K | MgO | CaO | (kg) | (g/m²) | N | Ρ | к | 25kg Bag | J | F | М | A | м | J | J | A | S | 0 | N | D |
| 24 (42%) | 2.5 | 21.5 | 5 | 11 | | | 25 | 20 25 30 35 | 48.0 60.0 72.0 84.0 | 10.0 12.5 15.0 17.5 | 27.5 33.0 | 714 - 1,250 | | | | | | | | | | | | |
| 20 (43%) | 1.4 | 18.2 | 5 | 10 | 2 | | 25 | 20 25 30 35 | 40.0 50.0 60.0 70.0 | 10.0 12.5 15.0 17.5 | 20.0 25.0 30.0 35.0 | 714 - 1,250 | | | | | | | | | | | | |
| 19 (42%) | 3.5 | 15.5 | 19 | 5 | 2 | | 25 | 20 25 30 35 | 38.0 47.5 57.0 66.5 | 38.0 47.5 57.0 66.5 | 12.5 15.0 | 714 - 1,250 | | | | | | | | | | | | |
| 15 (41%) | 1.4 | 13.2 | 5 | 15 | 2 | 2 | 25 | 20 25 30 35 | 30.0 37.5 45.0 52.5 | 10.0 12.5 15.0 17.5 | 37.5 45.0 | 714 - 1,250 | | | | | | | | | | | | |
| 10 (41%) | 1.4 | 8.2 | 5 | 21 | 2 | 2 | 25 | 20 25 30 35 | 20.0 25.0 30.0 35.0 | 10.0 12.5 15.0 17.5 | 42.0 52.5 63.0 73.5 | 714 - 1,250 | | | | | | | | | | | | |



Spreader Settings

| | Rotary Spreader (AccuPro 2000, SR-2000, SR-1, R8-A) | | | | | | | | | | | | | |
|--------------------------|---------------------------------------------------------------|--------------|----------------------------|----------------------------|--|--|--|--|--|--|--|--|--|--|
| Rate (g/m ²) | Cone Setting | Spread Width | Single Pass @ Full Rate | Double Pass @ Half Rate | | | | | | | | | | |
| 20 | 3 | 5m | Q ½ | N ½ | | | | | | | | | | |
| 25 | 3 | 5m | R ½ | 0 | | | | | | | | | | |
| 30 | 3 | 5m | S ½ | Р | | | | | | | | | | |
| 35 | 3 5m T | | | | | | | | | | | | | |

Nitrogen Content in Sportsmaster CRF Mini



Sportsmaster[®] Turf

New generation cost-effective controlled release technology for large turf areas

Sportsmaster Turf contains new E-Max controlled release technology to deliver nutrition consistently over an extended period. The formulation contains a balanced blend of NPK to support turf health through all stages of establishment and maturity.

Sportsmaster Turf Benefits

- 30% of nitrogen coated with E-Max Technology
- Consistent nitrogen release sustains turf colour for up to 3 months
- Balanced nutrition to suit all soil types
- Cost-effective formulation

Product Performance*

Granuale dispersal: 7 days (visually dispersal from surface) Turf response: 7 days Longevity: up to 3 months

*depending on environmental factors

Product Characteristic

Type: Granular Pack size: 500kg

Areas of Use

Racecourses Turf Production Outfield



ICL Made-To-Order

Custom build the ideal liquid turf applications for your turf nutrition

ICL are proud to offer you the capability to create your own made-to-order liquid fertilizers. Working with your local ICL Area Sales Manager you will be able to create your own bespoke mixes of branded ICL liquid fertilizer products.

It couldn't be simpler!

- You will firstly need to **choose the product** base nutrition source. This could be N-only, NK or NPK (or none) chosen from a selection of high quality ICL Greenmaster Liquid fertilizers.
- You then choose the supplements that you want to add. Again this will be from a selection of ICL brands including Vitanova Blade, Vitalnova AminoBoost, Greenmaster Liquid Effect Fe, and H2Pro wetting agents. The choice of supplement will be dependent on the needs of your turf and the reaction you require.

You may be wishing to enhance biological activity in the soil, encourage rooting, relieve turf stress, harden the turf or manage soil moisture more effectively or achieve a combination of these benefits.

- With the help of your ICL Turf Specialist you will then choose the relative proportioning of each ingredient to create the **ideal blend** of liquid nutrition for your turf. You will be able to check the analysis and decide on the ideal application rate.
- All that remains is to agree the quantity required (200 – 1,000 litres) and the price before placing your order.

Our ICL made-to-order service aim is to supply high quality and cost-effective liquid nutrition products that are tailored to the needs of your turf. All formulations will be fully tested by our team of formulation chemists for stability and compatibility before being approved for shipping.

With ICL made-to-order liquid fertilizers we will draw from your experiences and our expertise to help you create turf that performs better and better throughout the year.

Contact

Greenmaster® Liquid

Liquid fertilizers with foliar and root uptake

The formulation allows quick foliar uptake and nutrient movement through the plant.

Greenmaster Liquid Benefits

- Foliar feeding is available at lower water rates
- Compatible with Sportsmaster WSF SeaMax, the Vitalnova range of biostimulants, H₂Pro wetting agents, Primo Maxx II and many more ICL products
- > Up to 6 weeks longevity



Product Performance*

Turf response: < 24 hours Longevity: 2 - 6 weeks (depending on rate) *depending on environmental factors



The Complete Greenmaster Liquid Range

| Product Name Oxide Analysis | Technology/ Longevity | Product Notes | | Nu | trient | Break | down | |
|------------------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------|------------|-----------|-----------|------------|------------|------------|
| (Elemental Analysis) | Longevity | | | Nitro | ogen | | | |
| | | | Total N | N- NO₃ | N- NH4 | N- Urea | Total P | Total K |
| High N 25-0-0 +2MgO + TE (25-0-0 +1.2Mg + TE) | TMax | Mixed nitrogen sources to optimise plant uptake. Magnesium and trace elements to enhance turf health. | 25 | 7.3 | 5.9 | 11.8 | | |
| Spring & Summer 12-4-6 +TE (12-1.7-5 +TE) | Max | Complete NPK formula for main season feeding without excess growth. | 12 | 0.8 | | 11.2 | 4 | 6 |
| NK 10-0-10 +TE (10-0-8.3 +TE) | Max | The NK ratio balances growth and toughens the sward. Trace elements enhance turf health. | 10 | 0.7 | 0.7 | 8.6 | | 10 |
| High K 3-3-10 +TE (<i>3-1.3-8.3 +TE</i>) | TMax | Designed to apply prior to stressful periods. Trace elements enhance turf health. | 3 | 0.3 | 0.3 | 2.4 | 3 | 10 |
| Ca-Booster 8-0-0 +9CaO (8-0-0 +6.4Ca) | Max | Strengthens plant cell walls to toughen turf during stressful conditions. | 8 | 7 | 1 | | | |
| Effect Iron Fe 6.3Fe (6.3Fe) | TMax | For use throughout the growing season.Gives green-up within 3 hours. | | | | | | |
| STEP Liquid Chelated Trace Elements | Max | Contains chelated trace elements to maximise nutrient delivery and to prevent soil lock-up. | | | | | | |



| Ferti | lizers |
|-------|--------|
| | |

| | | N | utrien | t Brea | ıkdowı | n | | Specific Gravity (kg/L) | | Application Rate (L/ha) | Water Volume (L/ha) | | ient L ied (k | | Pack Coverage (m ² per | | R | ec | om | nme | end | dec | d Po | eric | od o | of U | lse | |
|-----|-----|-------|--------|--------|--------|-------|-------|-------------------------------|-----|-------------------------------|---------------------------|--------------|------------------|--------------|-----------------------------------------|---|---|----|----|-----|-----|-----|------|------|------|------|-----|---|
| | | | | | | | | (| (=) | (2/110) | (27103) | | | | 10L pack) | | | | | | | | | | | | | |
| CaO | MgO | В | Cu | Fe | Mn | Мо | Zn | | | | | Ν | Р | Κ | | J | F | Μ | A | N | 1 | J | J | A | S | 0 | Ν | D |
| | 2 | 0.01 | 0.004 | | 0.01 | 0.001 | 0.004 | 1.31 | 10 | 40 80 | 400 - 600 (Foliar) | 13.1 26.2 | 0.0 0.0 | 0.0 0.0 | 2,500 1,250 | | | | | | | | I | | | | | |
| | _ | 0101 | 0.001 | | 0.01 | 0.001 | 01001 | | 200 | 100 120 | 600 - 1,000 (Root) | 32.8 39.3 | 0.0 0.0 | 0.0 0.0 | 1,000 833 | | | | | | | | | | | | | |
| | | 0.01 | 0.004 | | 0.01 | 0.001 | 0.004 | 1.18 | 10 | 40 80 | 400 - 600 (Foliar) | 5.7 11.3 | 1.9 3.8 | 2.8 5.7 | 2,500 1,250 | | | | | | | | | | | | | |
| | | 0.01 | 0.001 | | 0.01 | 0.001 | 0.001 | 1.10 | 200 | 100 120 | 600 - 1,000 (Root) | 14.2 17.0 | 4.7 5.7 | 7.1 8.5 | 1,000 833 | | | | | | | | | | | | | |
| | | 0.01 | 0.004 | | 0.01 | 0.001 | 0.004 | 1.23 | 10 | 40 80 | 400 - 600 (Foliar) | 4.9 9.8 | 0.0 0.0 | 4.9 9.8 | 2,500 1,250 | | | | | | | | | | | | | |
| | | 0.01 | 0.004 | | 0.01 | 0.001 | 0.004 | 1.25 | 200 | 100 120 | 600 - 1,000 (Root) | 12.3 14.8 | 0.0 0.0 | 12.3 14.8 | 1,000 833 | | | | | | | | | | | | | |
| | | 0.01 | 0.004 | | 0.01 | 0.001 | 0.004 | 1.18 | 10 | 40 80 | 400 - 600 (Foliar) | 1.4 2.8 | 1.4 2.8 | 4.7 9.4 | 2,500 1,250 | | | | | | l | | | | | | | |
| | | 0.01 | 0.004 | | 0.01 | 0.001 | 0.004 | 1.10 | 200 | 100 120 | 600 - 1,000 (Root) | 3.5 4.2 | 3.5 4.2 | 11.8 14.2 | 1,000 833 | | | | | | | | | | | | | |
| 9 | | 0.01 | 0.004 | | 0.01 | 0.001 | 0.004 | 1.32 | 10 | 20 40 | 400 - 600 (Foliar) | 2.1 4.2 | 0.0 0.0 | 0.0 0.0 | 5,000 2,500 | | | | | | | | | | | I | | |
| , | | 0.01 | 0.004 | | 0.01 | 0.001 | 0.004 | 1.52 | 10 | 60 | 600 - 1,000 (Root) | 6.3 | 0.0 | 0.0 | 1,667 | | | | | | | | | | | | | |
| | | | | 6.3 | | | | 1.25 | 10 | 10 20 | 400 - 600 (Foliar) | 0.0 0.0 | 0.0 0.0 | 0.0 0.0 | 10,000 5,000 | | | | | | | | | | | | | |
| | | | | 0.5 | | | | 1.25 | 200 | 30 | 600 - 1,000 (Root) | 0.0 | 0.0 | 0.0 | 3,333 | | | | | | | | | | | | | |
| | | 0.200 | 1 000 | | 1 500 | 0.100 | 1 000 | 1.15 | 10 | 20 40 | 400 - 600 (Foliar) | 0.0 0.0 | 0.0 0.0 | 0.0 0.0 | 5,000 2,500 | | | | | | | | | | | | | |
| | | 0.200 | 1.000 | | 1.500 | 0.100 | 1.000 | 1.15 | 10 | 60 | 600 - 1,000 (Root) | 0.0 | 0.0 | 0.0 | 1,667 | | | | | | | | | | | | | |

Sprayer Information

| Spray Quality | Retention on Leaf Surface | | tentia Hazaı | | Foliar Applications | Root Applications |
|------------------|------------------------------|----------|-----------------|--|------------------------|----------------------|
| Very Fine | Good | High | | | J J | × |
| Fine | Good | | | | 1 | × |
| Medium | Good | | | | 1 | 1 |
| Coarse | Moderate | | | | 1 | 1 |
| Very Coarse | Poor | Very Low | | | × | J J |

*Spray drift can be minimised by using Colour Pro® Indicator

Nitrogen Content in Greenmaster Liquid



Vitalnova Blade

A proven biostimulant to boost microbial activity in soil and encourage rooting

A totally unique biostimulant for turf, containing a carefully engineered concentration of carbohydrates (sugars), seaweed and micronutrients.

Vitalnova Blade Benefits

- Increases rootmass by up to 40%
- Up to 50% increase in levels of beneficial bacteria
- Stimulates root dwelling microbes to improve nutrient uptake
- A versatile addition to an integrated turf management strategy

Product Characteristics

Pack size: 10 litre and 200 litre Analysis: 5-6.5-3.5 (5-2.8-2.9) + carbohydrates + seaweed + TE

Application Rate

Application rate: 25 - 50 L/ha Water Volume: 400 - 1.000 L/ha Recommended treatment frequency: Monthly

Product Performance*

Turf response: < 24 hours Longevity: 2 - 6 weeks (depending on rate) *depending on environmental factors





Recommended Period of Use

Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec



Vitalnova[®] Stressbuster

Unique liquid formulation designed to pre-condition turf against stress.

Vitalnova Stressbuster is a specially formulated liquid treatment to help condition turf against stress and also aid recovery from stress.

Vitalnova Stressbuster Benefits

- Helps condition turf against stress
- Provides turf boost at any time of year
- Immediate colour-up response

Product Characteristics

Pack size: 10 litre and 200 litre Analysis: 7-0-0 +2Fe + sugars + wetting agent + amino + TE

Application Rate

Application rate: 25 – 50 L/ha Water Volume: 400 – 600 L/ha Recommended treatment frequency: Monthly

Product Performance*

Turf response: Immediate Longevity: 3 - 4 weeks *depending on environmental factors



Recommended Period of Use

Feb Mar Apr May Jun

Contact www.icl-sf.co.uk www.icl-sf.ie

Jul Aug Sep Oct Nov Dec

Vitalnova[®] AminoBoost

Liquid fertilizer containing Amino Acids designed for foliar feeding in the summer.

Designed to enhance turf quality, and support a healthy plant, Vitalnova AminoBoost is an ideal product for summer use to stimulate growth or to maintain turf quality through periods of plant stress.

Vitalnova AminoBoost Benefits

- Ideal for summer foliar feeding
- Allows efficient nitrogen uptake in stressed conditions
- A perfect tank-mix partner for Primo Maxx II and other liquid and water soluble products

Product Characteristics

Pack size: 10 litre Analysis: 8-0-7 *(8-0-5.8)* + 10% amino acids

Application Rate

Application rate: 10 L/ha Water Volume: 400 – 600 L/ha Recommended treatment frequency: Monthly



Product Performance*

Turf response: Immediate

Longevity: 3 - 4 weeks *depending on environmental factors

Recommended Period of Use

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Fertilizers

Vitalnova® *SILK*

Potassium silicate formulation designed for leaf and stem cell strengthening.

A specially formulated liquid fertilizer containing high levels of potassium silicate. Vitalnova SILK has been designed to help increase leaf and stem strength to increase wear tolerance and help produce a cleaner cut. Improved plant cell strength may also provide benefits for an integrated approach to the management of leaf and root pathogens.

Vitalnova SILK Benefits

- Potassium silicate formulation
- Designed to improve cell strength
- For use as part of an Integrated Turf Management (ITM) approach

Product Characteristics

Pack size: 10 litre Analysis: 0-7-12 *(0-3-10)* + 6% Si

Application Rate

Application rate: 20 L/ha Water Volume: 400 – 600 L/ha Recommended treatment frequency: Monthly

Product Performance*

Turf response: Immediate Longevity: 3 - 4 weeks *depending on environmental factors



Vitalnova® SeaMax

Liquid formulation of the highly concentrated and effective SeaMax seaweed

Vitalnova SeaMax contains concentrated seaweed extract which has proven to be extremely effective in trials and by end users. The seaweed concentrate has been shown in trials to improve turf colour, turf quality, root development and stress tolerance.

Vitalnova SeaMax Benefits

- > Helps enhance root development
- Shown to improve turf colour and quality
- Helps condition turf against stress
- Extremely tank-mix compatible
- Highly concentrated Atlantic Ascophyllum nodosum

Application Rate

Application rate: 5 – 10 L/ha Water Volume: 600 L/ha

Product Characteristics

Type: Liquid Pack Size: 10 litre & 200 litre Pack Coverage: up to 2 hectares Analysis: 4-0-11 *(4-0-9.2)* + 10% concentrated seaweed



Recommended Period of Use

lan

Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

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Fertilisers

Fertilisers

Sportsmaster® Liquid Fe

Cost-effective liquid iron treatment for use on sports fields and fairways

Sportsmaster Liquid Fe has been developed to provide a quick and long-lasting green-up to sportsfield and outfield turf. The product is an ideal tank-mix partner for Primo Maxx II.

Sportsmaster Liquid Fe Benefits

- Instant colour response
- Long-lasting results (up to 4 weeks)
- Cost-effective formulation

Product Performance*

Turf Response: Within 24 hours Longevity: Up to 4 weeks *depending on environmental factors

Application Rate

Application rate: 20 – 40 L/ha Water Volume: 500 L/ha

Product Characteristics

Type: Liquid Pack Size: 200 litre & 1,000 litre Pack Coverage: 5 – 10 hectares

Sportsfields
Fairways
Outfields

Areas of Use



Recommended Period of Use

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Fertilizers

Sportsmaster[®] WSF

High performance ultra soluble fertilizers for treatment of large turf areas

Contains TMax to enhance foliar and root uptake. The WSF range provides excellent value when treating large areas such as golf fairways and sportsfields.

Sportsmaster WSF Benefits

- > Cost-effective fertilizer treatment
- TMax enhances nutrient uptake
- Low scorch risk
- Extremely pure and soluble
- Tank-mix compatible with Primo Maxx II

Product Performance*

Granule dispersal: Immediate Turf response: < 24 hours Longevity: 2 - 4 weeks (depending on rate) *depending on environmental factors



The Sportsmaster WSF Range

| Product Name Oxide Analysis | Technology | Product Notes | | Nutrie | nt Brea | kdown | | |
|---------------------------------------------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------|------------|-----------|-----------|------------|------------|--|
| (Elemental Analysis) | | Notes | ١ | litroger | l | | | |
| | | | Total N | N- NO₃ | N- NH₄ | N- Urea | Total P | |
| High N 35-0-14 +0.13Fe (35-0-11.6 +0.13Fe) | THEX | Nitrogen boost with potassium content provides balanced growth and stronger turf. | 35 | 4.3 | | 30.7 | | |
| High K 15-0-43 +0.13Fe (15-0-35.7 +Fe) | | The low nitrogen to high potassium ratio ensures maximum turf hardening and stress conditioning. | 15 | | | 2.3 | | |
| IRON 20%Fe | Max | Produces a dark green sward and promotes disease tolerance. | | | | | | |
| SeaMax 4-0-15 +TE (4-0-12.5 +TE) | Folior Food | Premium high density Atlantic <i>Ascophyllum</i> <i>nodosum</i> seaweed extract with proven plant benefits. | 4 | | 4 | | | |
| | | | | | | | | |



Application

Rate

(kg/ha)

Bag

Sizes

(kg)

Water

Volume

(L/ha)

Nutrient Levels

Applied (kg/ha) Coverage

Bag

per m²

Recommended Period of Use

Nutrient Breakdown

| Fertilizers |
|-------------|
|-------------|

Independent Sportsmaster WSF SeaMax trial

Significant improvements in turf quality and turf colour occurred after only two treatments compared to another industry standard as well as an untreated control.

| | | | | | | | | . 0, | .0 , | . , | | | | | | | | | | | | | | | | |
|------------|---------------------|--------------|--------------------|--------------|--------------------|---------------|-------------------|------|----------------|---------------------------|--------------|------------|--------------|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Total K | CaO | MgO | В | Cu | Fe | Mn | Zn | | | | N | Ρ | К | 15kg Bag | J | F | М | A | М | J | J | A | S | 0 | N | D |
| | | | | | | | | | 15 30 | 300 - 600 (Foliar) | 5.3 10.5 | 0.0 0.0 | 2.1 4.2 | 10,000 5,000 | | | | | | | | | | | | |
| 14 | | | | | | | | 15 | 45 60 | 600 - 1,000 (Root) | 15.8 21.0 | 0.0 0.0 | 6.3 8.4 | 3,333 2,500 | | | | | | | | | | | | |
| | | | | | | | | | 15 30 | 300 - 600 (Foliar) | 2.3 4.5 | 0.0 0.0 | 6.5 12.9 | 10,000 5,000 | | | | | | | | | | | | |
| 43 | | | | | | | | 15 | 45 60 | 600 - 1,000 (Root) | 6.8 9.0 | 0.0 0.0 | 19.4 25.8 | 3,333 2,500 | | | | | | | | | | | | |
| | | | | | 20 | | | 15 | 10 15 20 | 900 (Foliar & Root) | | | | 15,000 10,000 7,500 | | | | | | | | | | | | |
| 15 | 0.2 <i>-</i> 0.5 | 0.1 - 0.4 | 60 - 140 ppm | 1 - 4 ppm | 60 - 200 ppm | 4 - 15 ppm | 20 - 40 ppm | 1 | 1 | 600 - 1,000 | 0.04 | | 0.15 | 10,000 (1kg pack) | | | | | | | | | | | | |

Results – Turf Quality



Sportsmaster WSF SeaMax Tank-Mixing

- 1. Three quarter fill your spray tank with water
- 2. Turn on agitation
- 3. Add appropriate tank-mix partner (see compatibility table on pages 122 123)
- 4. Gradually sprinkle required quantity of SeaMax directly into spray tank to allow solubilisation
- 5. Fill spray tank to required volume with agitation6. Spray

Moisture Management

Water is a precious resource that is essential for premium quality turf

Our unique and flexible range of wetting agents/dew dispersants are designed to optimise water/moisture management.

In liquid, granular and tablet form, these wetting, water conservation and dew dispersant products have been developed to fit into your existing water management strategy. Using patented technology, the range offers preventative and curative products suitable for wet and dry conditions, with the flexibility for application at any time of year.

Moisture Management Contents

| H2Pro DewSmart | p40 |
|-----------------|-----|
| H2Pro TriSmart | p42 |
| H2Pro FlowSmart | p44 |
| H2Pro AquaSmart | p46 |
| H2Pro Tablet | p48 |
| H2Pro Granule | p49 |
| Qualibra | p50 |

Moisture Management

Hi2Pro[®] DewSmart

H₂Pro DewSmart is a newly formulated dew dispersant product for turf grass areas.

DewSmart is designed to prevent or reduce the formation of dew on the grass leaf. This is ideal for use as part of an ITM approach to help minimize the risk of disease outbreaks and improve surface quality.

H₂Pro DewSmart Benefits

- Under optimum conditions 3-4 weeks control of dew can be achieved
- Reduces the need for early morning switching of dew from greens
- Greens can be clear of dew for a cleaner cut and for the early morning golfer
- Simple to apply with standard boom sprayer

Product Performance

Longevity: Up to 21 days if applied in optimum conditions

Product Characteristics

Pack size: 10 litre Packs per outer: 2 x 10 litre Pack coverage: 10,000m²

Application Rate

Application rate: 10 L/ha Water Volume: 300 – 400 L/ha







Directions For Use

- 1. The best performance is achieved when applied under optimum conditions
- 2. Apply to a dry turf surface
- 3. Cut or brush grass before product application
- 4. Use nozzles suitable for foliar applications

Tank-mixing Instructions

Seek technical advice to discuss tank-mixing options. Mixing this product with other products may adversely impact performance.



Without Dewsmart

With Dewsmart (26 days after treatment)

Recommended Period of Use

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | | | | | | | | |



Moisture Management

H2Pro[®] TriSmart

A high quality wetting and water conservation agent

TriSmart is designed for quality turf areas, its unique triple-active formulation provides great control over your moisture management. Containing three water management technologies, it provides great water penetration, even water spread through the rootzone and improves the water holding capacity of sandy rootzones. Very effective against LDS (Localised Dry Patch) development, the block polymer surfactant has also been selected for increased longevity in the rootzone.

H₂Pro TriSmart Benefits

- Offers preventative and curative action against Dry Patch
- Evenly distributes moisture through the upper soil profile
- > Significantly reduces irrigation requirements

Product Characteristics

Pack size: 5 litre Type: Penetrant, Spreading, Holding

Application Rate

Full programme: 10 L/ha monthly Late-start programme: 25L/ha then 10L/ha monthly Water Volume: 600 – 1,000 L/ha











Recommended Period of Use

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | | | | | | | | |



Moisture Management

FlowSmart

A high quality wetting and water conservation agent

FlowSmart is the next generation penetrant wetting agent for the industry; FlowSmart combines new surfactant technology as a carefully blended combination of polymer and super-penetrant. FlowSmart reduces surface tension – providing excellent water infiltration and penetration, with a selected block co-polymer to retain FlowSmart in the rootzone allowing re-wetting and continues effective and efficient water penetration and water movement.

H₂Pro FlowSmart Benefits

- > Helps surface water penetrate quickly
- Maintain year round playing surfaces, providing a drier surface in wet conditions
- Maximizes the effectiveness of irrigation treatments
- Assist with flushing of carbonates and salts from rootzones









Recommended Period of Use

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | | | | | | | | |



Moisture Management

H2Pro[®] AquaSmart

A high quality wetting and water conservation agent

AquaSmart is an outfield wetting agent designed for a low rate of application and so provides a cost effective programme. The special blend of surfactants in AquaSmart formulated for all soil types can help maintain turf quality through periods of dry weather by maximising the effectiveness of irrigation or rainfall. Essentially it provides greater water-use efficiency by preventing drying and allowing quick rewetting of the soil, so maintaining a healthy plant and a quality turf surface.

H₂Pro AquaSmart Benefits

- Improves water use efficiency for outfield areas
- Reduces incidence of dry patch formation
- Flexible application rates
- Protects turf quality through periods of dry conditions

Product Characteristics

Pack size: 5 litre Type: Penetrant Application Rate

Application rate: 5 L/ha Water Volume: 400 – 800 L/ha











Recommended Period of Use

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | | | | | | | | |



Moisture Management



H2Pro[®] Tablet

A hose-end applied wetting agent for effective hand watering

H₂Pro Tablet is especially effective for the treatment of localised dry spot and for helping to reduce overall irrigation requirement.

H₂Pro Tablet Benefits

- > Effective rewetting through the rootzone
- Excellent water spreading and penetration characteristics
- For spot-treating problem areas and to complement a main wetting agent programme



Product Characteristics

Pack size: 6 x 250g tablets Pack coverage: 6 x 500m²

Areas of Use



| H₂Pro Tablet | | | | | | | | |
|---------------------------|--------------------|-------------------------|-----------------------------------|--|--|--|--|--|
| Applicator | Product | Spray Time (minutes) | Area Treated (m ²) | | | | | |
| H2Pro Pellet Pro Gun | 1 x 250g Tablet | 5 - 10 | 250 - 500 | | | | | |
| Recommended Period of Use | | | | | | | | |

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Moisture Management



H2Pro[®]

Granule



A granular wetting agent, ideal for spot treatments and use on bowling greens

H₂Pro granular formulation is easy to apply across wide or localised areas to improve water management and for the treatment of localised dry patch.

H₂Pro Granule Benefits

- Easy to apply by hand or spreader
- Unique curative and preventative action against Dry Patch/localised Dry Spot
- Can be used at any time during the growing season
- Wash in immediately to move wetting agent into the soil

Product Characteristics

Pack size: 10kg Pack coverage: 500m²

Application Rate

20g/m²



H₂Pro Granule

| Spreader Type | | | Cone Setting | | Spreader Width (m) | | ation | Settir | ting (20g/m²) | | | |
|---------------------------------|-----|-----|-----------------|------|-----------------------|---------------|---------|--------|---------------|---------|--|--|
| | | Sei | Setting | | width (m) | | 1x Pass | | | 2x Pass | | |
| Rotary Spreader Accupro 2000 | | 5 | | 4.0 | | М | | | J | | | |
| Drop Spreader SS-2 | | n/a | | 0.91 | | 4 | | 3 ¾ | | | | |
| Classic Drop Spreader | | n | ı/a | 0.5 | 55 | 6 1⁄2 | | | - | | | |
| Recommended Period of Use | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Jan Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | De | | |
| | | | | | | | | | | | | |
| | | | | | | | | - | 1. C. | 1000 | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | onta | act w.icl- | ſ | | | | | |

Moisture Management

Qualibra®

Qualibra is a premium wetting and water conservation agent

Qualibra combines a unique and dynamic penetrant with a powerful polymer to optimise water penetration and conservation within the rootzone.

Qualibra Benefits

- Optimises water penetration
- Prevents damaging Dry Patch
- Makes better use of irrigation resources

Product Characteristics

Pack size: 10 litre (200 & 1,000 litre also available) Packs per outer: 2 x 10 litre Pack coverage: 5,000m²

Application Rate

Maximum individual dose: 20 L/ha Water volume: 500 - 1,000 L/ha









Qualibra Moves and Retains Moisture Deeper



Directions For Use

- 1. Apply Qualibra at approximately monthly intervals in a preventative programme to prevent the development of localised Dry Spot and aid water management.
- 2. Typically applied from early spring to autumn, but can be applied throughout the year if required.

Recommended Period of Use





Plant Protection & Control

When it comes to protecting turf and managing landscape areas, ICL's range of plant protection and control products provides the majority of the tools you'll need in your armoury

Powerful, fast-acting herbicides teamed with proven, effective solutions for turfgrass pests and the leading range of fungicides providing preventative, curative and eradicant action, all ensure you stay in control.

Plant Protection & Control Contents

| Primo Maxx II | p54 | Enforcer | p74 |
|----------------|-----|-----------------------|-----|
| Instrata | p56 | Esteron T | p76 |
| Instrata Elite | p58 | Rescue | p78 |
| Headway | p60 | Roundup ProActive | p80 |
| Banner Maxx II | p62 | Roundup ProVantage | p82 |
| Heritage Maxx | p64 | Amenity Glyphosate XL | p84 |
| Heritage | p66 | Finale 150 | p86 |
| Medallion TL | p68 | Icade | p88 |
| Nemasys J & G | p70 | Proshield | p90 |
| Praxys | p72 | Ecoplug Max | p92 |

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PrimoMaxx[®]II

Plant growth regulator

The ultimate growth regulator for the improvement of turf performance

Primo Maxx II Benefits

- Increases sward density and root mass
- Reduces mowing frequency by up to 50%
- Enhances turf colour, appearance, strength and resilience
- Improves stress tolerance

Product Characteristics

Pack size: 5 litre & 10 litre Packs per outer: 4 x 5 litre and 2 x 10 litre Contains 116.4g/L trinexapac-ethyl MAPP No. 17509 PCS No. 05401

Application Rate

Maximum individual dose: 3.2 L/ha Water volume: 300 - 1,000 L/ha Maximum total dose: 16 L/ha per year



Superior Rooting and Drought Resistance Bent grass, drought stressed, USGA rootzone







Source: Bioforsk. Lepaa, Finland. 2008. All data mean of 10 observations. LSD 5% = 0.45



Recommended Period of Use

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Directions For Use

- To optimise best results, applications can start when consistent grass growth commences or when soil and air temperatures average 8 - 10°C or above for more than 5 days consecutively. For weather and temperature guidance go to www.greencast.co.uk.
- 2. Various application rates are recommended depending on intended area of use.
- 3. For best results apply with Liquid N (minimum 2.5kg N/ha).
- 4. Avoid applications during frosty or drought conditions.
- 5. Can be tank-mixed with H2Pro TriSmart and H2Pro FlowSmart wetting agents, Greenmaster Liquids and Sportsmaster WSF water-soluble fertilizers. Advice should always be sought from your ICL Technical Area Sales Manager before any tank-mix is applied.
- 6. Mix with Colour Pro[®] Indicator spray pattern indicator to aid spraying, to condition water and to minimise spray drift.
- 7. FOR USE ONLY AS A HORTICULTURAL PLANT GROWTH REGULATOR.

| Арр | lication | Rate |
|-----|----------|------|
|-----|----------|------|

| Area of Use | Greens | Tees | Fairways and Amenity | Rough and Semi-rough | Winter Sports |
|-----------------------|-----------------------------------------|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------|----------------------------------------------------------|
| First application | April* | April* | April | April | April |
| Application frequency | Every 2 - 4 weeks | Every 3 - 5 weeks | Every 4 - 6 weeks | Every 5 - 8 weeks | Every 4 - 6 weeks |
| Height of cut | < 7mm | 10 - 18mm | <18mm | >18mm | >10mm |
| Dose rate | 0.2 - 0.4 L/ha | 0.8 - 1.6 L/ha | 0.8 - 1.6 L/ha | Up to 2.4 L/ha | 0.8 - 1.6 L/ha |
| Notes | Application window depends on growth | Tees containing perennial ryegrass will require increased frequency of application | Fairways mown at <12mm will require more frequent, lower rate applications | Dose rate and frequency will depend on species composition | Use lower rates and frequencies for turf mown below 18mm |

*Apply when consistent grass growth commences or when soil and air temperatures average 8 - 10°C or above for more than five days consecutively.



Unrivalled disease control from this three-way formulation

Instrata Benefits

- Contact and systemic active ingredients for year-round use
- Protective, curative and eradicant action for effective control
- Quick-acting and long-lasting control

Product Characteristics

Pack size: 3 litre Packs per outer: 4 x 3 litre Pack coverage: 3,333m² Contains 362g/L chlorothalonil, 56.9g/L propiconazole, 14.5g/L fludioxonil MAPP No. 16458 PCS No. 05186

Application Rate

Maximum individual dose: 9 L/ha Water volume: 500 - 1,000 L/ha Maximum number of treatments: 1 per year per area

| Areas | of | Use | |
|-------|----|-----|--|

- ✓ Golf Greens
- 🗸 Tees
- 🗸 Fairways
- ✓ Bowling Greens

Label Approved Diseases

- ✓ Microdochium patch
- ✓ Anthracnose
- 🗸 Dollar spot
- ✓ Brown patch

REWARDS PRODUCT see pages 4-5



Microdochium patch (Fusarium patch







Recommended Period of Use

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Directions For Use

- 1. To optimise results use preventatively or during early stages of disease establishment.
- 2. Go to **www.greencast.co.uk** for weather and temperature guidance and disease prediction service.
- 3. Avoid applications during frosty or drought conditions.
- 4. Maximum one treatment per year.
- 5. Instrata is tank-mixable with other products within the ICL range. Advice should always be sought from your ICL Technical Area Sales Manager before any tank-mix is applied.
- 6. Mix with Colour Pro[®] Indicator spray pattern indicator to aid spraying, to condition water and to minimise spray drift.
- 7. For use on golf courses and bowling greens.
- 8. Do not apply using a knapsack sprayer.
- 9. FOR USE ONLY AS A HORTICULTURAL FUNGICIDE.

Tank-Mix Table (see pages 122 - 123 for full Tank-Mix Table)

| | Greenmaster Liquid | | | | | | | | Biostimulants | | |
|--------|--------------------|----|--------|-------------|-------------------|------------|--------|-----------|---------------|------------|-----------|
| High N | Spring & Summer | NK | High K | STEP Liquid | Effect Iron Fe | Ca-Booster | High N | High K | IRON | SeaMax | Vitalnova |
| 11 | J J | × | × | JJ | × | × | 11 | <i>ss</i> | <i>√√</i> | J J | × |

| | We | etting Age | nts | | PGR | PGR Herbicides | | | Fungicides | | | |
|--------------------------------|---------------------------------|---------------------------------|--------------------------------|----------|------------------|----------------|-------|--------|------------|------------------|-----------------|-------------------|
| H ₂ Pro TriSmart | H ₂ Pro FlowSmart | H ₂ Pro AquaSmart | H ₂ Pro DewSmart | Qualibra | Primo Maxx II | Praxys | Jewel | Rescue | Headway | Heritage Maxx | Medallion TL | Banner Maxx II |
| \ | X | × | × | \ | 11 | × | × | × | × | × | × | X |



🖫 Instrata Elite

Outside in protection. Contact and systemic action against Microdochium

Funaicide

Instrata Elite Benefits

- > Contact and systemic active ingredients
- Broad spectrum disease control
- > Acts on all stages of the disease cycle
- Protective and curative action
- Rainfast in 30 minutes

Product Characteristics

Pack size: 1 litre & 3 litre Packs per outer: 4 x 3 litre Pack coverage: 1 hectare Contains 80.3g/L difenoconazole and 80.3g/L fludioxonil MAPP No. 17976 PCS No. 05399

Application Rate

Maximum individual dose: 3 L/ha Water volume: 125 - 500 L/ha Maximum number of treatments: 2 per year





Label Approved Diseases

- ✓ Microdochium patch
- ✓ Anthracnose
- ✓ Dollar spot
- Brown Patch



MORE THAN A CONTACT

With INSTRATA ELITE you get Syngenta's proven contact + activity – targeting spores in the thatch and at the soil surface, as well as on the leaf. That can quickly reduce disease pressure during high risk periods.

> ALL ROUND PROTECTION ON LEAF. IN LEAF AND IN ORGANIC MATTER



UPTAKE TO NEW GROWTH UPTAKE FROM LEAF, CROWN AND ROOT

INSTRATA ELITE can not only be taken up by leaves and the crown but also by the roots. So any active applied that finds its way to the rootzone can be taken up and is not lost.



HIGHLY EFFECTIVE LOWER EFFECT

Recommended Period of Use

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Tank-Mix Table (see pages 122 - 123 for full Tank-Mix Table)

| | | Gree | nmaster L | iquid | | | | Sportsma | aster WSF | | Biostimulants | |
|-----------|--------------------|----------|-----------|-------------|-------------------|------------|------------|------------|-----------|------------|-----------------|--|
| High N | Spring & Summer | NK | High K | STEP Liquid | Effect Iron Fe | Ca-Booster | High N | High K | IRON | SeaMax | Vitalnova Blade | |
| JJ | JJ | \ | JJ | JJ | 1 | \ | J J | J J | <i>√√</i> | J J | J J | |

| | We | etting Age | nts | | PGR | PGR Herbicides | | | | Fungicides | | | |
|-------------------|---------------------------------|--------------------|--------------------------------|----------|------------------|----------------|-------|--------|---------|------------------|-----------------|-------------------|--|
| H2Pro TriSmart | H ₂ Pro FlowSmart | H2Pro AquaSmart | H ₂ Pro DewSmart | Qualibra | Primo Maxx II | Praxys | Jewel | Rescue | Headway | Heritage Maxx | Medallion TL | Banner Maxx II | |
| 1 | × | 1 | X | \ | <i>√√</i> | × | × | × | × | <i>√√</i> | 11 | J J | |

FC

Second Second S Fungicide

A dual action broad spectrum systemic fungicide

Headway Benefits

- Preventative, curative and eradicant action
- Rapid uptake and movement within the plant
- Long-lasting protection

Product Characteristics

Pack size: 3 litre Packs per outer: 4 x 3 litre Pack coverage: 1 hectare Contains 62.5g/L azoxystrobin, 104g/L propiconazole MAPP No. 14396 PCS No. 03557

Application Rate

Maximum individual dose: 3 L/ha Water volume: 250 - 1,000 L/ha Maximum number of treatments: 4 per year

Areas of Use

✓ Amenity Turf (golf greens, tees, fairways, bowling greens and sportsfields)

Label Approved Diseases

- Microdochium patch
- ✓ Dollar spot
- Leaf spot
- ✓ Take-all patch
- ✓ Anthracnose

REWARD: see pages 4-5

Microdochium patch Control 60 50 30 Application 2 Application 2 Application 2 + 4 weeks + 8 weeks + 12 weeks

90

80

Proven Performance

STRI trials at Bingley in Yorkshire showed Headway to be an outstandingly effective treatment for Microdochium patch. with incredibly persistent results, weeks after application. Headway delivered significantly greater levels of disease

Headway

Standard Contact

Standard Systemic

control, which lasted far longer than other fungicides.

Headway Treatment of Microdochium patch

Headway has performed outstandingly in trials, with up to 48% better disease control than the average of these comparative fungicides.

Headway achieved virtually 100% control over four weeks after application, and was still achieving over 80% control more than twelve weeks after application.

PRODUCT

GHeadway



Recommended Period of Use

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Directions For Use

- 1. To optimise results, use as a protectant treatment or, when a predictive assessment indicates a high risk of disease development, go to **www.greencast.co.uk**.
- 2. Avoid applications during frosty or drought conditions.
- 3. Do not make more than 2 consecutive applications.
- 4. Headway is tank-mixable with other products within the ICL range, with the exception of any siliconebased wetting agents. Advice should always be sought from your ICL Technical Area Sales Manager before any tank-mix is applied.
- 5. Application to young grass: can be applied after the 2nd leaf stage.
- 6. Mix with Colour Pro[®] Indicator spray pattern indicator to aid spraying, to condition water and to minimise spray drift.
- 7. FOR USE ONLY AS A HORTICULTURAL FUNGICIDE.

Tank-Mix Table (see pages 122 - 123 for full Tank-Mix Table)

| | Greenmaster Liquid | | | | | | | | Biostimulants | | | |
|-----------|--------------------|-----------|--------|----------------|-------------------|------------|-----------|--------------------|---------------|------|--------|--------------------|
| High N | Spring & Summer | NK | High K | STEP Liquid | Effect Iron Fe | Ca-Booster | High N | Spring & Summer | High K | IRON | SeaMax | Vitalnova Blade |
| <i>\\</i> | \$ \$ | <i>\\</i> | 11 | 11 | × | J J | <i>\\</i> | × | 11 | X | 55 | J J |

| | We | etting Age | nts | | PGR | l | Herbicides | 5 | Fungicides | | | |
|-------------------|---------------------------------|--------------------|--------------------------------|----------|------------------|--------|------------|--------|------------------|-----------------|-------------------|-------------------|
| H2Pro TriSmart | H ₂ Pro FlowSmart | H2Pro AquaSmart | H ₂ Pro DewSmart | Qualibra | Primo Maxx II | Praxys | Jewel | Rescue | Heritage Maxx | Medallion TL | Banner Maxx II | Instrata Elite |
| 11 | X | <i>√√</i> | X | \ | \ \ | × | × | X | × | X | X | JJ |



🖫 Banner Maxx'll

An exciting NEW high-performance formulation of the specialist turf fungicide

Banner Maxx II Benefits

- Effective against Microdochium patch, Dollar spot and Anthracnose
- Fast leaf uptake
- Fast movement through the plant
- Rainfast in 15 minutes

Product Characteristics

Pack size: 1 litre & 3 litre Packs per outer: 12 x 1 litre & 4 x 3 litre Pack coverage: 1 hectare Contains 162g/L propiconazole MAPP No. 18038 PCS No. 05461

Application Rate

Maximum individual dose: 3 L/ha Water volume: 200 - 400 L/ha Maximum number of treatments: 2 per year















Recommended Period of Use

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Directions For Use

- 1. For best results use as a preventative or during early stages of disease establishment or, when a predictive assessment indicates a risk of disease development, go to www.greencast.co.uk.
- 2. Approved for application using a knapsack sprayer.
- 3. Avoid applications during frosty or drought conditions.
- 4. Banner Maxx II is tank-mixable with other products within the ICL range. Advice should always be sought via your ICL Technical Representative before any tank-mix is applied.
- 5. Minimum 14-day interval between treatments.
- 6. Mix with Colour Pro[®] Indicator spray pattern indicator to aid spraying, to condition water and to minimise spray drift.
- 7. For use on managed amenity turf and amenity grassland.
- 8. FOR USE ONLY AS A HORTICULTURAL FUNGICIDE.

Tank-Mix Table (see pages 122 - 123 for full Tank-Mix Table)

| | Greenmaster Liquid | | | | | | Sportsmaster WSF | | | | | Biostimulants |
|--------|--------------------|------------|--------|----------------|-------------------|------------|------------------|--------------------|--------|------|------------|--------------------|
| High N | Spring & Summer | NK | High K | STEP Liquid | Effect Iron Fe | Ca-Booster | High N | Spring & Summer | High K | IRON | SeaMax | Vitalnova Blade |
| 11 | J J | J J | 11 | 11 | 55 | 11 | J J | 11 | 55 | 55 | J J | 11 |

| | We | tting Age | nts | | PGR | H | Herbicides Fungicides | | | | | | |
|-------------------|---------------------------------|--------------------|--------------------------------|----------|------------------|--------|-----------------------|--------|---------|------------------|----------|-----------------|----------|
| H2Pro TriSmart | H ₂ Pro FlowSmart | H2Pro AquaSmart | H ₂ Pro DewSmart | Qualibra | Primo Maxx II | Praxys | Jewel | Rescue | Headway | Heritage Maxx | Heritage | Medallion TL | Instrata |
| \ | JJ | <i>\\</i> | X | \ | 1 | × | × | × | × | <i>\\</i> | 1 | <i>\\</i> | X |



Heritage Maxx[®]

Long-lasting systemic fungicide with root uptake

Heritage Maxx Benefits

- Quick and efficient uptake by leaf and root to move the active ingredient to the point of infection
- Seven turf diseases on the label
- Active recycling prolongs the period of activity

Product Characteristics

Pack size: 3 litre Packs per outer: 4 x 3 litre Pack coverage: 1.2 hectares Contains 95g/L azoxystrobin MAPP No. 18246 PCS No. 03978

Application Rate

Maximum individual dose: 2.5 L/ha Water volume: 125 - 1,000 L/ha Maximum number of treatments: 4 per year

| Areas of Use |
|------------------------------------------|
| Managed Amenity Turf |

Label Approved Diseases

- ✓ Microdochium patch
- ✓ Anthracnose
- ✓ Brown patch
- ✓ Leaf spot
- ✓ Rusts
- ✓ Take-all patch
- ✓ Type 2 Fairy ring



REWARD

PRODUCT

see pages 4-5

Active recycling, cut, after cut, after cut



The Maxx formulation moves faster for quicker activity

The unique Maxx formulation has been specifically designed for turf applications. Its advantages include:

- Outstanding turf safety
- Increased and enhanced product uptake for faster effect
- Very stable in the sprayer tank
- Easy-to-use liquid formulation
- Compatible and easy-to-mix with other products

Label Approved Diseases

| | Heritage Maxx | Pyraclo- strobin | Trifloxy- strobin |
|----------------------------|-----------------------|------------------------|------------------------|
| Microdochium patch | ~ | | v |
| Anthracnose | ✓ | × | × |
| Brown patch | ~ | × | × |
| Leaf spot / Melting out | ~ | × | × |
| Rusts | ~ | × | × |
| Take-all patch | ~ | × | × |
| Type 2 Fairy ring | ~ | × | × |
| LERAP | No LERAP | Category B restriction | Category B restriction |

Recommended Period of Use

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | | | | | | | | |

Directions For Use

- 1. To optimise best results use as preventative or during early stages of disease establishment or, when a predictive assessment indicates a risk of disease development, go to **www.greencast.co.uk**.
- 2. Avoid applications during frosty or drought conditions.
- 3. Heritage Maxx is tank-mixable with other products within the ICL range. Advice should always be sought via your ICL Technical Representative before any tank-mix is applied.
- 4. Mix with Colour Pro[®] Indicator spray pattern indicator to aid spraying, to condition water and to minimise spray drift.
- 5. For use on managed amenity turf, including fine turf and amenity grassland.
- 6. FOR USE ONLY AS A HORTICULTURAL FUNGICIDE.

Tank-Mix Table (see pages 122 - 123 for full Tank-Mix Table)

| | | Gree | nmaster L | iquid | | | | Biostimulants | | | | |
|--------|--------------------|------|------------|----------------|-------------------|------------|--------|--------------------|------------|-----------|--------|---------------------|
| High N | Spring & Summer | NK | High K | STEP Liquid | Effect Iron Fe | Ca-Booster | High N | Spring & Summer | High K | IRON | SeaMax | Vitalnova SeaMax |
| 11 | <i>JJ</i> | 11 | J J | J J | × | 11 | 11 | <i>JJ</i> | J J | <i>JJ</i> | 11 | 55 |

| | We | etting Age | nts | | PGR | | Herbicides | 5 | | Fungi | cides | |
|-------------------|---------------------------------|---------------------------------|--------------------------------|------------|------------------|--------|------------|--------|---------|-----------------|-------------------|------------------|
| H2Pro TriSmart | H ₂ Pro FlowSmart | H ₂ Pro AquaSmart | H ₂ Pro DewSmart | Qualibra | Primo Maxx II | Praxys | Jewel | Rescue | Headway | Medallion TL | Banner Maxx II | lnstata Elite |
| J J | J J | 11 | × | J J | 11 | X | × | × | × | 1 | 11 | 11 |



High performance systemic strobilurin fungicide

Heritage Benefits

- Seven turf diseases on the label
- Derived from naturally occurring compounds
- The only strobilurin that can be used up to 4 times per year

Product Characteristics

Pack size: 100g & 500g Pack coverage: 2,000 & 10,000m² Contains 500g/kg azoxystrobin MAPP No. 13536 PCS No. 05062

Application Rate

Maximum individual dose: 0.5 kg/ha Water volume: 125 - 1,000 L/ha Maximum number of treatments: 4 per year



Heritage

✓ Managed Amenity Turf

Label Approved Diseases

Areas of Use

- ✓ Microdochium patch
- ✓ Anthracnose
- ✓ Brown patch
- Leaf spot
- 🗸 Rusts
- ✓ Take-all patch
- ✓ Type 2 Fairy ring





Recommended Period of Use (weather permitting)

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | | | | | | | | |

Directions For Use

- 1. For best results use as protectant or during early stages of disease establishment or, when a predictive assessment indicates a risk of disease development, go to www.greencast.co.uk.
- 2. Apply preventatively as a drench (1,000 L/ha of water) for control of Take-all patch disease and make 2 applications 14 days apart.
- 3. Avoid applications during frosty or drought conditions.
- 4. Heritage is tank-mixable with other products within the ICL range. Advice should always be sought via your ICL Technical Representative before any tank-mix is applied.
- 5. Mix with Colour Pro[®] Indicator spray pattern indicator to aid spraying, to condition water and to minimise spray drift.
- 6. FOR USE ONLY AS A HORTICULTURAL FUNGICIDE.

Tank-Mix Table (see pages 122 - 123 for full Tank-Mix Table)

| | | Gree | nmaster L | iquid | | | | Biostimulants | | | | |
|--------|--------------------|------------|------------|----------------|-------------------|------------|------------|--------------------|--------|-----------|-----------|--------------------|
| High N | Spring & Summer | NK | High K | STEP Liquid | Effect Iron Fe | Ca-Booster | High N | Spring & Summer | High K | IRON | SeaMax | Vitalnova Blade |
| 55 | <i>\\</i> | J J | J J | 55 | 55 | × | J J | <i>JJ</i> | J.J | <i>JJ</i> | <i>JJ</i> | X |

| | We | etting Age | nts | | PGR | I | Herbicide | 5 | Fungicides | | | | |
|--------------------------------|---------------------------------|---------------------------------|--------------------------------|----------|------------------|--------|-----------|--------|------------|-----------------|-------------------|----------|--|
| H ₂ Pro TriSmart | H ₂ Pro FlowSmart | H ₂ Pro AquaSmart | H ₂ Pro DewSmart | Qualibra | Primo Maxx II | Praxys | Jewel | Rescue | Headway | Medallion TL | Banner Maxx II | Instrata | |
| 55 | 11 | 11 | × | 11 | 11 | × | X | × | × | <i>JJ</i> | J J | × | |



Contact+ fungicide designed for use in the winter

Fungicide

SMedallion TL

Medallion TL Benefits

- Fast-acting knockdown of Microdochium patch spores on leaf, thatch and spores
- Gives long-lasting control in winter conditions
- Ideal as a preventative disease application

Product Characteristics

Pack size: 1 litre & 3 litre Packs per outer: 12 x 1 litre, 4 x 3 litre Pack coverage: 3,333m², 1 hectare Contains 125g/L fludioxonil MAPP No. 15287 PCS No. 04188

Application Rate

Maximum individual dose: 3 L/ha Water volume: 125 - 500 L/ha Maximum number of treatments: 4 per year



Tackling Pathogen





Recommended Period of Use (weather permitting)

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | | | | | | | | |

Directions For Use

- Begin applications when conditions are favourable for disease infection or at the very beginning of disease symptom expression.
- 2. Avoid applications during frosty or drought conditions.
- 3. Apply when soil temperature is below 7°C and when clipping yields are low.
- 4. Maximum number of 4 sprays per year.
- 5. A minimum interval of 14 days should be observed between applications.
- 6. Do not leave the spray liquid in the sprayer for long periods (such as during meal breaks or overnight).
- 7. Only make up the amount of spray required for immediate use.

Tank-Mix Table (see pages 122 - 123 for full Tank-Mix Table)

| | | Green | master Lie | quid | | | | | Biostimulants | | | |
|-------------------|---------------------------------|---------------------------------|--------------------------------|----------------|-------------------|------------|-------------------|--------------------|-----------------|------|-----------------|---------------------|
| High N | Spring & Summer | NK | High K | STEP Liquid | Effect Iron Fe | Ca-Booster | High N | Spring & Summer | High K | Iron | SeaMax | Vitalnova SeaMax |
| JJ | 11 | × | × | \ | \ * | X | J J | × | × | × | J J | 11 |
| | | | | | DCD | | l la sela i a i a | | | | | |
| | vve | etting Age | nts | | PGR | | Herbicic | les | | FU | ngicides | |
| H2Pro TriSmart | H ₂ Pro FlowSmart | H ₂ Pro AquaSmart | H ₂ Pro DewSmart | Qualibra | Primo Maxx II | Praxys | Jewel | Rescue | Heritag Maxx | | ay Bann Maxx | |
| 11 | × | 11 | × | 11 | 11 | × | X | × | 55 | × | 55 | × |

*Tank-mix compatible but do not let sprayer unagitated for more than one hour

FC

Nemasys® J&G

Biological solutions for Chafer Grub and Leatherjacket control in turf

Nemasys Benefits

- Nemasys G contains the insect parasitic nematode *Heterohabditis bacteriophora* for the control of Chafer Grubs
- Nemasys J contains Steinernema feltiae for the control of Leatherjackets
- Kills larvae within 10–14 days
- Safe for turf and wildlife

Product Characteristics

Pack size: tray (250 million nematodes) Pack coverage: 500m² Analysis: contains insect parasitic nematodes

Application Rate

Dose rate: 1 tray per 500m² Water volume: 50L water per 500m² Maximum number of treatments: 1 per year



Nemasys J Controls Leatherjackets



Eggs are laid in late August and hatch within two weeks. The young start feeding immediately. Nemasys J should be applied and watered into the turf about two weeks after the adult Crane Fly have been seen. This is usually from August to September, which is the best time to apply nematodes, as the soil temperature is around 12°C.

Nemasys G Controls Chafer grubs



The eggs of the Chafer beetle hatch and begin feeding on the roots of the grass plant from July until late September. They then burrow deep into the ground, lying dormant under the soil until spring when they move to the surface and emerge as beetles, and so the cycle repeats.

Delivery

Nemasys G and Nemasys J are living products. They are dispatched directly from our production facility by overnight carrier. Once received, the transport box should be opened and refrigerated at between 2°C and 5°C for up to a maximum of four weeks.


Recommended Period of Use



Directions For Use

- Treatments should be applied when grubs are present and close to the soil surface, usually in August/September (during late October/November grubs move deeper in the soil making them difficult to target).
- 2. Thoroughly spike/aerate the affected area prior to treatment to provide channels for quick water movement down through the upper soil profile and to where the grubs are situated.
- 3. Pre-mix the tray in a bucket of cold water.
- 4. Add to a conventional spray tank or knapsack sprayer.
- 5. Add H₂Pro FlowSmart or H₂Pro TriSmart wetting agent to help penetration.
- Check sprayers have no filters below 50 mesh (0.3mm) and remove if necessary. For knapsack sprayers minimum filter is 18 mesh (1.0mm).
- 7. Start sprayer agitation. Continue agitation throughout application.
- 8. Apply immediately. Do not allow the spray solution to remain in the tank longer than one hour after mixing.
- 9. After application the soil needs to be kept moist, either by irrigation or natural rainfall.
- 10. The soil temperature must be above 12°C at application and for at least two weeks afterwards.

Shot far right: This golf course has dramatic evidence of the sort of damage that can be caused to turf.

This golf course has been torn apart by birds and other wild animals searching for the larvae of Chafer grubs and Leatherjackets.

Praxys[®]

High performance, highly concentrated systemic selective weedkiller

Praxys Benefits

- Systemic uptake right down to the roots, with no regrowth
- Rapid entry and rainfast within one hour
- Lowest dosage rates and water volume of any selective herbicide available

Product Characteristics

Pack size: 2 litre Packs per outer: 8 x 2 litre Pack coverage: variable Contains 144g/L fluroxypyr-meptyl, 80g/L clopyralid and 2.5g/L florasulam MAPP No. 13912 PCS No. 03510

Application Rate

Maximum individual dose: 2 L/ha Water volume: 200 L/ha Maximum number of treatments: 1 per year



Areas of Use

- Managed Amenity Turf
- ✓ Amenity Grassland
- 🗸 Lawns



Praxys kills tough weeds with the three most powerful actives















Recommended Period of Use

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Directions For Use

- 1. The ideal timing for application is when the weeds are small and actively growing.
- 2. Broad-leaved weeds not present at application will not be controlled.
- 3. An interval of 4 weeks must elapse between application of Praxys and over-seeding turf.
- 4. Do not use any plant material treated with Praxys for composting or mulching.
- 5. Do not apply if turfgrass is wet.
- 6. Do not apply to turf, lawns or grass areas which are under stress.
- 7. Do not apply if night temperatures are low, if ground frost is imminent, or in periods of prolonged cold or dry weather.
- 8. Take extreme care to avoid drift onto crops and non-target plants, e.g. trees, shrubs and bedding outside the target area.

Tank-Mix Table (see pages 122 - 123 for full Tank-Mix Table)

| | Greenmaster Liquid | | | | | Sportsmaster WSF | | | | Biostimulants | | |
|--------|--------------------|----|--------|----------------|-------------------|------------------|--------|--------------------|--------|---------------|--------|---------------------|
| High N | Spring & Summer | NK | High K | STEP Liquid | Effect Iron Fe | Ca-Booster | High N | Spring & Summer | High K | IRON | SeaMax | Vitalnova SeaMax |
| 1 | 1 | 1 | 1 | 1 | 1 | × | × | 1 | X | × | 1 | 1 |

| | We | etting Age | nts | | PGR | Herbi | icides | | | Fungicides | ; | |
|--------------------------------|---------------------------------|--------------------|--------------------------------|----------|------------------|-------|--------|------------------|---------|-----------------|-------------------|----------|
| H ₂ Pro TriSmart | H ₂ Pro FlowSmart | H2Pro AquaSmart | H ₂ Pro DewSmart | Qualibra | Primo Maxx II | Jewel | Rescue | Heritage Maxx | Headway | Medallion TL | Banner Maxx II | Instrata |
| 1 | 1 | 1 | × | X | × | × | × | × | × | × | × | X |



Enforcer®

Herbicide for broad-leaved weeds in managed amenity turf

Enforcer Benefits

- > Potent combination of 4 active ingredients
- Ideal for all sports turf areas and lawns
- Various application methods including knapsack

Product Characteristics

Pack size: 5 litre Pack per outer: 4 x 5 litre Contains: 70 g/l 2,4-D, 20 g/l dicamba, 70 g/l MCPA and 42 g/l mecoprop-P MAPP no. 17274: Not available in ROI

Application Rate

Maximum individual dose: 7.5 L/ha Maximum number of treatments: 1 per year Latest time of application: End of September in the year of treatment Water Volume: 1,000 L/ha Maximum total dose: 7.5 L/ha Areas of Use

- Lawns
- ✓ Managed Amenity Turf
- ✓ Golf Courses
- ✓ Sportsfields



Weeds Controlled

| Weed | Application rate | Comments |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------------------|
| White clover (<i>Trifolium repens</i>), daisy (<i>Bellis perenis</i>), deadnettle (<i>Lamium sp.</i>), speedwell (<i>Veronica sp.</i>), Shepherd's Purse (<i>Capsella bursa</i> <i>pastoris</i>) and Field Forget-me-not (<i>Myosotis arvensis</i>) | 7.5 | Susceptible |
| Dandelion (<i>Taraxacum officinale</i>), broad-leaved dock (<i>Rumex</i> <i>obtusifolius</i>), Self heal (<i>Prunella</i> <i>vulgaris</i>), creeping buttercup (<i>Ranunculus repens</i>), yarrow (<i>Achillea</i> <i>millefolium</i>) and corn chamomile (<i>Anthemis arvensis</i>). | 7.5 | Moderately susceptible |











Directions For Use

- 1. Shake well before use.
- 2. Enforcer can be applied by tractor-mounted boom sprayer or by knapsack sprayer.
- 3. The activity of Enforcer is promoted by climatic conditions which favour photosynthesis such as warm temperatures and sunny conditions.
- 4. Avoid treatment during dry periods and when rain is expected within 24 hours after the treatment.
- 5. Do not spray to grass suffering from drought or during freezing conditions.
- 6. May take up to 3 weeks before weed destruction is seen. Do not re-apply if weed destruction is not seen directly after treatment.
- 7. For best results, apply the product at least 5 days after the last mowing and wait 7 days after application before mowing again.
- 8. Do not use on new grass for 6 months after establishment.
- 9. When renovating treated areas an interval of 6-8 weeks should elapse before re-seeding.

Recommended Period of Use

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec



Esteron T

Low volume dual action selective herbicide for the control of broad-leaved weeds in managed amenity turf and domestic lawns

Weeds Controlled





Esterton T Benefits

- > New generation selective herbicide
- Ultra-low dose rate
- Low water rate
- Rainfast in 1 hour

Product Characteristics

Pack size: 2 litre & 5 litre Pack coverage: 4.17 ha Contains 300 g/L 2,4-D and 6.25 g/L florasulam MAPP No. 17432. Not available in ROI

Application Rate

Maximum individual dose: 1.2 L/ha Water volume: 100 - 400 L/ha Maximum number of treatments: 1 per year

Areas of Use

 Managed Amenity Turf (including domestic lawns)

Esteroni

✓ Amenity grassland











Recommended Period of Use (weather permitting)

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Directions For Use

- 1. Apply when weeds are in active growth, normally between March and October when the soil is moist.
- 2. Do not apply in periods of drought unless irrigation is applied.
- 3. Do not spray when rain is imminent.
- 4. Do not apply if night temperatures are low, if ground frost is imminent, or in periods of prolonged cold weather.
- 5. Avoid mowing 3 days before and after spraying to ensure sufficient weed leaf surface is present and to allow uptake and movement of Esteron T within the weed.
- 6. Clippings from grass treated with Esteron T can be safely used for mulch after the third cut.
- 7. An interval of four weeks must elapse between application of Esteron T and re-seeding turf.
- 8. Ensure newly sown amenity turf has become established before treating. Turf sown in the spring or summer may be ready for spraying after about two months, but turf sown in late summer or autumn should not be sprayed until growth is resumed in the following spring, perhaps eight months after sowing turf
- 9. Esteron T is of low volatility and is therefore not subject to vapour drift. Take extreme care to avoid drift onto non-target plants e.g. trees, shrubs, bedding outside the target area as this can cause severe damage.

Rescue

Herbicide

Rescue Benefits

- Controls Ryegrass but leaves Fescue, Poa annua and Browntop Bentgrasses unaffected
- Can improve playing quality and reduce maintenance requirements

Product Characteristics

Pack size: 1 litre Pack coverage: 7,518 - 10,000m² Contains 45g/L pinoxaden and 11.25g/L cloquintocet-mexyl MAPP No. 14518 PCS No. 03682

Application Rate

Maximum individual dose: Spring - 1.33 L/ha Autumn - 1 L/ha Water volume: 250 - 500 L/ha Maximum number of treatments: 2 per year



Selective herbicide for the control of ryegrass

on golf courses and bowling greens

What can you expect to see?



1. Before application

Ryegrass infestations on fine turf create an uneven and unsightly surface that is difficult to maintain and is unpopular with players. The application of Rescue is a quick and effective route to restoring fine turf quality.

2. Two to three weeks after application

Ryegrass and other susceptible weed grasses start to go pale yellow and begin to die back. The timings at which effects are seen will be weather dependent; in good growing conditions results are faster, but in dry or poor conditions it will take longer for Rescue to have the desired effect.

3. Three to five weeks after application

Do the 'Rescue Rub Test'. When the treated patches have died back, rub the patch with the palm of your hand. If the treated turf surface breaks up it has passed the Rescue Rub Test. Any temporary yellowing on Bentgrasses should be outgrown. Over-seeding can take place at any time when weather and soil conditions are conducive.

4. Five to eight weeks after application

Target Ryegrass and other weed grasses will have died right back. Over-seeding should have taken place and, in good conditions, new seedlings will be starting to emerge. Apply appropriate Greenmaster liquid to encourage seedling development.

5. Eight to ten weeks after application

Ryegrass and other grass species will have been controlled. Any plants that have survived treatments will show weakened growth and susceptibility to a second Rescue application. Seedlings from over-seeding programmes should be well established.

The finished result

The removal of Ryegrasses and other unwanted coarse grasses can allow the successful re-establishment and maintenance of a high quality, fine turf playing surface.

Directions For Use

- 1. Best results achieved from Rescue programmes started in autumn.
- 2. Apply twice for optimal control.
- 3. Over-seeding following Rescue application can achieve faster rejuvenation of fine turf playing surfaces and minimise invasion of weed species.
- 4. Dense, well established patches of Ryegrass may require a programme of two or three applications to achieve full control.
- 5. Follow-up Rescue treatments on an annual basis may be required to control new seedling re-infestation.
- 6. Rescue can be applied with conventional golf course or bowling green sprayer (including knapsack).
- 7. Spray Rescue in 250 500 litres of water per hectare, ensure good coverage but avoid overwetting.
- 8. Rescue should not be tank-mixed with other plant protection products.

Recommended Period of Use



For furthe ICL Techn or visit

Roundup[®] ProActive

Highly active Roundup formulation for use in a wide range of areas

Roundup ProActive Benefits

- Rainfast within 1 hour for annuals and 4 hours for perennials
- Non-hazardous as classified by COSHH
- > Widest range of tested tank-mixing partners
- Less risk of drift
- Superior performance in challenging conditions

Product Characteristics

Pack size: 5 litre Packs per outer: 4 x 5 litre Water volume: 100 - 200 L/ha Contains 360g/L glyphosate MAPP No. 17380 Not available in ROI



Weeds Controlled

Roundup ProActive herbicide controls most emerged grasses and broad-leaved weeds. It is important that all weeds are at the correct growth stage when treated, otherwise some regrowth may occur and this will need re-treatment.

Apply Roundup ProActive herbicide once grasses and broadleaved weeds have emerged and they have actively-growing green leaves.

Compatibility List

| Physically compatible | |
|-----------------------|--------------------|
| Chikara | MCPA* |
| Dursban WG | Speedway Total |
| 2,4,D* | Pistol (Proshield) |
| Frigate/T80 | Stomp 400 |
| Kerb Flo | Marker dyes |

*Antagonism when used at high rates.

Do not add more than 1L/ha of MCPA or **2,4,D** to 3 L/ha of RoundupProActive.

Application Rate

| Rate | Equivalent dilution | Weeds controlled |
|---------|------------------------------------|---------------------------------------------------------------------|
| 3 L/ha | 1:67 or 15ml per litre of water | Annual grasses, annual broad-leaved weeds |
| 4 L/ha | 1:50 or 20ml per litre of water | Arable weeds, pre-planting of trees |
| 5 L/ha | 1:40 or 25ml per litre of water | Most perennial weeds |
| 6 L/ha | 1:33 or 30ml per litre of water | Floating aquatic weeds |
| 10 L/ha | 1:20 or 50ml per litre of water | Rhododendron, lvy, Horsetail and difficult waxy-leaved plants |

How does it work?

Roundup ProActive is absorbed by the weed leaves and circulates throughout the plant, including the roots. When it reaches the growing point it intervenes with protein production and effectively starves the plant to death. In warm weather, treated weeds turn red and yellow after 7-10 days. In cold weather this can take up to 4 weeks.



Directions For Use

- Roundup ProActive is recommended for control of annual and perennial grasses and broad-leaved weeds in non-crop areas, for cleaning up weedy ground prior to planting or sowing and for aquatic weed control. Roundup ProActive may also be used as a directed spray in ornamental plantings, orchards and for spot treating weeds in grassland. Roundup ProActive must be targeted only at weed growth on hard surfaces such as roadsides and paths (see label for details).
- 2. DO NOT MIX, STORE OR APPLY ROUNDUP PROBIO IN GALVANISED OR UNLINED STEEL CONTAINERS OR SPRAY TANKS.
- 3. DO NOT leave spray mixtures in tanks for long periods and make sure tanks are WELL VENTED.
- 4. Rainfast in 1 hour on annuals and Couch grasses, and in 4 hours on broad-leaved weeds and perennial grasses.
- 5. Do not spray onto weeds which are naturally senescent, or where growth is impaired by drought, high temperatures, a covering of dust, flooding or frost at or immediately after application, otherwise poor control may result.
- 6. Do not spray in windy conditions, as drift onto desired crops or vegetation can severely damage or destroy them.
- 7. Do not tank-mix Roundup ProActive with adjuvants, pesticides or fertilizers, except as specified in the Compatibility section.
- 8. Exclusion times: people, pets and wildlife need not be kept out of treated areas. It is best not to walk in areas where the spray is still wet, as transfer to other vegetation may lead to unwanted damage to other foliage. Once the spray is dry, this cannot occur.
 - For further information contact your ICL Technical Area Sales Manager or visit www.icl-sf.co.uk | www.icl-sf.ie

Plant Protection

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Roundup[®] ProVantage

High load, clean label premium glyphosate

Roundup ProVantage Benefits

- Rainfast in 1 hour
- Effective in all conditions
- Quick and long-lasting control of difficult perennial weeds
- Concentrated formulation for low application rate

Product Characteristics

Pack size: 5 litre Packs per outer: 4 x 5 litre Pack coverage: 0.63 - 1.25 hectares Contains 450g/L glyphosate MAPP No. 15534 Not available in ROI



Controls Heavyweight Weeds















Application Rate

| Crop/s | situation | Maximum individual dose | | | |
|---------|-------------------------------------------------------------------------------------|-------------------------------------------------------------|--|--|--|
| bear ve | surfaces not intended to getation; permeable surfaces ing soil; hard surfaces | 4.0 L/ha | | | |
| | d waters; open waters; land lately adjacent to aquatic areas | 4.8 L/ha | | | |
| Forest | Forest nursery weed control | 8.0 L/ha | | | |
| | Stump application | 160ml per litre water (16% solution of product in water) | | | |
| | Chemical thinning (by injection) | 1.6ml per 10cm diameter (or less) of tree | | | |
| Amenit | y vegetation | 4.0 L/ha | | | |
| | le crops; all non-edible crops ction before sowing or planting) | 4.0 L/ha | | | |

Directions For Use

- 1. Avoid spray drift.
- 2. A period without rain of 6 hours is recommended but gives excellent results on annuals and Couch in 1 hour, and 4 hours on perennial weeds.
- 3. Use as directed to weeds which are actively growing, with enough leaf cover to absorb the product.
- 4. Weeds are less susceptible when growth is restricted by natural senescence or by factors such as drought or waterlogging.
- 5. For aquatic, forestry, weed wipe, injection and stump application, always refer to the product label or contact your ICL Technical Representative.
- 6. Avoid applications during frosty, waterlogged, hot or drought conditions.
- 7. Mix with Colour Pro spray pattern indicator to aid spraying, to condition water and to minimise spray drift.
- 8. For use on natural surfaces not intended to bear vegetation, permeable surfaces overlying soil and hard surfaces.
- 9. FOR USE ONLY AS A HORTICULTURAL/ AGRICULTURAL/INDUSTRIAL HERBICIDE.

Recommended Period of Use

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec





Amenity Glyphosate XL

Cost-effective glyphosate formulation for the control of emerged weeds

Amenity Glyphosate XL Benefits

- Cost-effective treatment of many emergent weeds
- Fully formulated with original Roundup surfactant
- Rainfast in 6 hours

Product Characteristics

Pack size: 5 litre Packs per outer: 4 x 5 litre Pack coverage: 0.5 - 1.0 hectare Contains 360g/L glyphosate MAPP No. 17997 Not available in ROI







Application Rate

| Crop/situation | Maximum individual dose |
|---------------------------------|-----------------------------------------------|
| Land not intended to bear crops | 5 L/ha |
| Forestry: weed control | 10 L/ha |
| Chemical thinning | 2ml per 10cm diameter (or less) of tree |
| Stump application | 20% solution of product in water (200ml/L) |

Water volume: 80 - 250 L/ha

Recommended Period of Use





Finale[®]

150

Fast-acting total herbicide, an alternative for hard surface weed control

Finale 150 Benefits

- Rapid knockdown 4 days compared to 7 – 10 days for glyphosate
- Excellent control of Equisetum arvense (Field Horsetail)
- > On label approval for hard surfaces
- Can be used for preparing sports turf for line marking

Product Characteristics

Pack size: 1 litre & 5 litre Pack coverage: 1 – 1.66 hectares Contains: 150 g/L (13.52% w/w) glufosinate-ammonium MAPP No. 14518 PCS No. 03682

Application Rate

Maximum individual dose: 5 L/ha Water volume: 200 – 400 L/ha Maximum number of treatments: 2 per year

Areas of Use

- Managed amenity turf (line marking preparation)
- Natural surfaces not intended to bear vegetation
- Permeable surfaces overlaying soils and hard surfaces.



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Field horsetail (Equisetum arvense) trials





Bayer have been running trials on the control of field horsetail (Equisetum arvense). Finale 150 was tested in two different settings – on a natural surface not intended to bear vegetation with a long established field horsetail issue and on a paved surface which was also heavily infested with field horsetail.

The trials compared the efficacy of a 360g/L formulation of glyphosate, a tank mix of a 360g/L of glyphosate and Finale 150, Finale 150 as a single application, and Finale 150 with two applications 28 days apart.

The results exceeded all expectations – Finale 150 was the only product to have an immediate impact, visible results were seen after just 48 hours versus up to 14 days for glyphosate. Whilst control of the field horsetail was rapidly achieved with just one application, it was found that the best levels of control were achieved by making two applications of Finale 150, 28 days apart.

| Application Equipment | Vehicle-n Hydraulio | | Knapsacl | | |
|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------|-------------------------------|--------------------------------|--|
| Weed problem | Rate per Hectare | Water per Hectare | Rate per 100m ² | Water per 100m ² | |
| Seedlings of all species. Estab- lished annual weeds and grasses as specified in the 'weeds con- trolled' section on the label | 3 litres | 200-400 litres | 30 ml | 4.5 litres | |
| Established annual and perennial weeds and grasses as specified in the 'weeds controlled' section on the label | 5 litres | 200-400 litres | 50 ml | 4.5 litres | |

| Line marking Application equipment | Line machine with 7.5cm swath | | | | |
|---------------------------------------|-------------------------------|-----------|---------------------------------|--|--|
| Type of line | Finale [®] 150 | Water | Coverage in linear metres | | |
| To reinforce existing lines | 30 ml | 4 litres | 1333 m | | |
| (FINALE® 150, 3L/ha) | 120 ml | 16 litres | 5332 m | | |
| To create new lines | 50 ml | 4 litres | 1333 m | | |
| (FINALE [®] 150, 5L/ha) | 200 ml | 16 litres | 5332 m | | |

Recommended Period of Use

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | | | | | | | | |



For further information contact your ICL Technical Area Sales Manager or visit www.icl-sf.co.uk | www.icl-sf.ie Plant Protection

icade[®]

For the control of invasive and tough woody weeds



Icade Benefits

- Outstanding levels of translocation gets lcade deep into roots of the weeds
- Rainfast in 1 hour
- Safe to grasses
- Outstanding levels of translocation gets lcade deep into the roots of weeds
- > Very low amounts of active ingredients
- Virtually no odour

Application Rate

Broadcast application: Apply at 3L/ha for cotrol of Rosebay Willowherb. Apply at 4L/ha for control of Bramble, Common Mugwort, Common Nettle, Creeping Thistle and Giant Hogweed.

Localised spot application: Apply 15ml in 10L of water for the control of Bramble, Buddleia and Gorse. Apply 20ml in 20L of water for the control of Japanese Knotweed and Broom.

Lade herbicide is approved for use under powerlines

Product Characteristics

Pack size: 1 litre Packs per outer: 10 x 1 litre Contains 12g/L aminopyralid and 120g/L triclopyr MAPP No. 16182 PCS No. 04249

Areas of Use

IndustrialAmenity Grassland



Icade quickly translocates throughout the target weed



Directions For Use

- 1. Apply Icade to actively growing weeds with a dry leaf.
- 2. Spray lcade to thoroughly wet the leaves up to the point of run off.
- 3. Ensure good spray coverage of the whole weed.
- 4. Spray to avoid drift.
- 5. Allow at least 1 hour before any rainfall.
- 6. Only mix enough spray for the job in hand.
- 7. DO NOT USE on airfields.
- 8. DO NOT USE on land that will be grazed by livestock.
- 9. DO NOT USE on land within one year of sowing seed.
- 10. DO NOT USE on land where the vegetation will be cut for animal feed, fodder or bedding, nor for composting or mulching within one calendar year of treatment.
- 11. Not approved for forestry/woodlands/airfields/golf courses.

Users must have received adequate instruction, training and guidance in the safe use of the product, and must take all reasonable precautions to protect the health of human beings, creatures and plants, and safeguard the environment.

Recommended Period of Use

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec



Proshield[®]

Pre and post-emergent non-selective total herbicide

Proshield Benefits

- Residual barrier prevention against weed germination
- Rainfast within 1 hour
- > For use on gravel and soft surfaces

Product Characteristics

Pack size: 5 litre Packs per outer: 4 x 5 litre Pack coverage: 1.1 hectare Contains 250g/L glyphosate and 40g/L diflufenican MAPP No. 17525 Not available in ROI

Application Rate

Maximum individual dose: 4.5 L/ha Water volume: 200 - 400 L/ha Maximum number of treatments: 1 per year (at latest by end September)











> nonnonno Martinette

Interiores

How it works

Glyphosate circulates throughout the entire plant causing rapid knockdown and kill of foliage and roots.



Diflufenican adheres to the soil surface to form a chemical barrier preventing further weed seed germination.

Directions For Use

- 1. For use on gravel and soft surfaces.
- 2. One application kills weeds rapidly.
- 3. Rainfast within 1 hour.
- 4. The product is applied post-emergence to control a wide range of annual and perennial broadleaved weeds and grasses on porous surfaces on land not intended to bear vegetation.
- 5. Applications should not be made to plants growing under stress conditions, such as drought or water-logging, as reduced levels of control may result.
- 6. Do not spray in windy weather.
- 7. Do not add any wetting agent or adjuvant oil, as this may result in reduced activity.
- 8. FOR USE ONLY AS A HORTICULTURAL/ INDUSTRIAL HERBICIDE.

Recommended Period of Use

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | | | | | | | | |

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Ecoplug Max

Treatment for tree stumps to minimise root and stump sprouting

Ecoplug Max Benefits

- 95 100% efficacy on treated stumps, preventing re-growth
- 100% selective with no effect on surrounding trees or vegetation
- Reduces the interval between clearing by 50 - 100%
- Supports requirements of the sustainable use directive to minimise use of pesticides

Product Characteristics

Pack size: 100 x 300mg plugs Contains 300mg granular glyphosate MAPP No. 17581 Not available in ROI



How to Use











Directions For Use

- 1. Cut the tree as close to the ground as possible.
- 2. For optimum results, treat within 2 days of cutting; however, stumps can be treated up to 1 month after felling, but translocation of active ingredient may be slower.
- 3. Measure the diameter of the cut face and calculate how many plugs to use from the application rate table.
- 4. Drill a hole in the stump; the hole should be 25 30mm deep and 13mm wide using an adapted drill to control the depth.
- 5. Space the holes no more than 6 8cm apart around the entire circumference of the stump.
- 6. Drill as close to the bark as possible, because the tree's transport system is directly adjacent to the bark.
- 7. Insert Ecoplug Max plugs into each hole with the thicker end protruding outwards.
- 8. Using a hammer, drive the Ecoplug Max plug in completely so that its head seals the drilled hole, causing the plug to release the herbicide.
- 9. For best results, stump treatment should be done not more than 2 days after felling.
- 10. Do not use for any other purpose than treatment of freshly cut tree stumps.
- 11. FOR USE ONLY AS AN INDUSTRIAL/FORESTRY HERBICIDE.



Application Rate

| | Stump diameter in cm | Number of Ecoplugs |
|----------------------------------------------------------------------------------------|------------------------------------------------|-----------------------------------------|
| GROUP 1 Alder, Aspen, Beech, Birch, Elm, Lime, Maple, Mountain Ash, | 3-6cm 6-10cm 10-14cm 14-18cm >20cm | 1 2 3 4 6-8cm between plugs |
| Willow | Each buttress root | 1 |
| GROUP 2 Ash, Cherry, Bird Cherry, Oak | 3-6cm 6-10cm 10-14cm 14-18cm >20cm | 2 3 4 6 5-6cm between plugs |
| | Each buttress root | 2 |
| GROUP 3 Poplar, Rhododendron, Elder, Tree of Heaven | 3-6cm 6-10cm 10-14cm 14-18cm >20cm | 2 4 6 8 3-4cm between plugs |
| | Each buttress root | 2 |

Recommended Period of Use

 Jan
 Feb
 Mar
 Apr
 May
 Jun
 Jul
 Aug
 Sep
 Oct
 Nov
 Dec



For further information contact your ICL Technical Area Sales Manager or visit www.icl-sf.co.uk | www.icl-sf.ie Plant Protection

ProSelect is our range of turfgrass seed blends for golf courses, sports fields, turf growers and landscape contractors.

Varieties in the range are developed through extensive breeding selection by ICL and our International seed partners to bring the most up-to-date material to the market. This synergy provides continuous blend development and improvement of our mixes in the turf and amenity sector.

Grass Seed Contents

| ProSelect Icons | p96 |
|----------------------|-----|
| Grass Seed Varieties | p97 |
| ProSelect | p98 |

What the icons mean:

Wear Tolerance

Able to withstand intensive wear with good recovery. Suitable for sports stadia, training grounds and any areas under intensive use.

Cold Tolerance

Low temperature germination and growth. Suitable for early and late season conditions where low ground/air temperatures are experienced.

Shade Tolerance

Performs well in low light levels. Suitable in stadia, building surrounds or in natural shade created by trees.

Brown Patch Tolerance

Rhizoctonia (Brown patch) can affect most cool season turf grasses. This icon indicates the varieties and blends with improved resistance.

Visual Merit

An overall combination of grass sward quality taking into account year-round colour, shoot density, disease resistance and leaf texture.

Zip-Seed

Zip-Seed provides emerging seedlings with a complete package of nutritional components that improve plant health.



By maximising establishment success rates, you are able to improve the qualities of the sward to help improve the turf performance. Newer grasses, compared to invading weed grasses such as Poa annua, are far more efficient in taking up nutrients so there's far less nutritional wastage.

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Zip-Seed is a non-phytotoxic seed treatment including a colourant, making it easily visible, in bag and in use.

> The Zip-Seed treatment is particularly beneficial at the start or end of the season, when temperatures are lower or water is restricted.

Low Maintenance

Drought Tolerance

Tolerance to high temperatures

species that can be grown.

Reduced mowing frequency with low maintenance requirements. This includes reduced clipping yield, low growth rates and reduced mowing requirements.

Salt Tolerance

Tolerance of salinity. Suitable for coastal locations with naturally higher salinity and facilities using irrigation drawn from saline sources.

Disease Tolerance

Higher natural tolerance to the common turf diseases.

Sod (Turf) Quality

Blends that are free from contamination from other grasses and weeds.

ICL has developed an easy reference system using icons to assist turf managers when choosing the appropriate blends and varieties for their own situations.

No matter what the demands. wear, heat, salinity, shade or diseases, ICL has the solution.

Seed purity and performance are the foundations of integrated turf management programmes.











Grass Seed Varieties

We are also able to offer a comprehensive range of quality grass seed varieties for golf, sports, landscaping and amenity turf.

Golf course managers can produce beautiful, fast, true greens using creeping bent grass, browntop bent or fescue. Complement your greens, add colour and contrast, and enhance all-round playability with a range of high quality fine turf varieties. You can also choose varieties that are suitable for maintaining strong, healthy turf on fairways, tees, rough and semi-rough areas on all types of golf courses.

Perennial ryegrass is the choice of sports ground managers, but it is increasingly used on the golf course where the durability of the sward it produces benefits areas that are under stress from intensive wear.

Our perennial ryegrass varieties combine outstanding aesthetic appearance with strength and durability to produce surfaces that withstand the demands of intensive playing schedules.

| Variety | Species | lcons | Areas of Use/Attributes | Sowing Rate | Mowing Heigh |
|----------------|-----------------------------------|----------|------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|
| Penn Å1 | Creeping Bent | 😔 📥 😜 🀔 | ✓ GOLF-GREENS ✓ FINE TURF | 5-8g/m² | 🛄 🏮 3-7mm |
| Riptide | Creeping Bent | 🖕 ě 🌺 | ✓ GOLF-GREENS ✓ FINE TURF | 5-8g/m² | \Bigg 🏮 3-7mm |
| Eurocordus | Perennial Ryegrass | n 🗧 🐔 🔮 | ✓ FOOTBALL ✓ RUGBY ✓ LAWNS ✓ WINTER SPORTS ✓ RACECOURSES | 25-35g/m ² | 10-25mn |
| Carnac | Perennial Ryegrass | n 🕹 🗳 🔮 | ✓ SPORTS ✓ LAWNS | 25-35g/m ² | 10-25mn |
| Memorial | Creeping Bent | e | ✓ GOLF - GREENS ✓ FINE TURF | 5-8g/m ² | \Bigg 🔹 3-7mm |
| Eurocrown | Chewings Fescue | n 🕹 🖕 🗲 | ✓ Golf-greens ✓ tees ✓ fairways | 20-30g/m ² | 5-25mm |
| Heritage | Browntop Bent | n 🕹 🔮 | ✔ GOLF-GREENS | 5-8g/m² | <u>)</u> 🛊 3-7mm |
| Cathrine | Slender Creeping Red Fescue | n 🕹 🖕 😴 | ✓ GOLF-GREENS, TEES, FAIRWAYS ✓ FINE TURF ✓ LAWNS | 20-30g/m ² | 5-25mm |
| Beacon | Hard Fescue | n | ✓ GOLF - ROUGH, SEMI-ROUGH ✓ LANDSCAPING ✓ LAWNS | 20-30g/m ² | Annual harvest |
| Ryder | Strong Creeping Red Fescue | ₩ 🕹 🍓 | ✓ GOLF - ROUGH, SEMI- ROUGH ✓ LANDSCAPING ✓ LAWNS | 20-30g/m ² | ₩ 1 >25mm |
| Eurosport | Perennial Ryegrass | n 🕹 🗳 🔮 | ✓ DUAL PURPOSE SPORTS ✓ FOOTBALL ✓ RUGBY ✓ LAWNS ✓ WINTER SPORTS ✓ RACECOURSES | 25-35g/m ² | 125mm |
| Torsion TRT | Perennial Ryegrass | | ✓ FOOTBALL ✓ RUGBY ✓ LAWNS ✓ WINTER SPORTS ✓ RACECOURSES | 25-35g/m ² | 10-25mm |
| Enigma | Smooth-stalked Meadow-grass | | ✓ GOLF-✓ TEES ✓ FAIRWAYS ✓ WINTER SPORTS LAWNS | 15-25g/m ² | 15-25mm |

For further information contact your ICL Technical Area Sales Manager or visit www.icl-sf.co.uk | www.icl-sf.ie

Grass Seed

ProSelect°

Our range of quality turfgrass seed blends

ProSelect is our range of turfgrass seed blends for golf courses, sportsfields, turf growers and landscape contractors. Varieties in our range of grass seeds have been developed through an extensive selection by ICL and our international seed parrtners

ProSelect Benefits

- Developed through extensive trial programmes
- Individual varieties to suit turf requirements
- > Each blend contains highly rated varieties



The Complete ProSelect Range

| | Product Name | lcons | Pack Sizes (kg) | Mowing Height |
|---|------------------------------------------------------------|----------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | ProSelect 1 Premium Pitch All Rye | É 🔮 🏵 🎨 | 20 | 25mm |
| • | ProSelect 2 Tees/Fairways/ Outfields with Rye | 2.2 | 25 | 10-25mm |
| | ProSelect 3 Fairway Fescue | | 25 | 10-25mm |
| | ProSelect 4 Greens 80/20 | | 25 | Den al construction de la construcción de la constr |
| | ProSelect 5 Fescue Greens | * * | 25 | ₩ 3-7mm |
| | ProSelect 6 Fine Fescue with Rye Blend | * | 25 | 10-25mm |
| | ProSelect 7 Sport | * | 25 | 25mm |
| | ProSelect 8 All Bent | 2 | 25 | ₩ 3-5mm |
| | ProSelect 9 Creeping Bent | E Riptide | 25 | ₩ ■ 3-7mm |
| | ProSelect 10 Browntop Bent | Eur | 11.34 | ₩ ● 3-7mm |

Fertilizers



| Product Notes | Sowing Recommendations | Varieties | Areas of Use |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Establishes a dense, hard-wearing blend of perennial ryegrasses, offering top performance for high quality stadia, sports fields and racecourses. Contains Zip-Seed treatment to help optimise germination and establishment rates. | New sowing: 35 - 50g/m ² Overseeding: 20 - 35g/m ² | 100% Perennial ryegrass • Shorty • Eurocordus • Carnac | STADIUM PITCHES SPORTSFIELDS TEES/ SURROUNDS RACECOURSES |
| A fescue and ryegrass blend that produces a fine, dense and wear-tolerant sward with excellent visual merit. With strong divot recovery delivered by Torsion perennial ryegrass and Enigma SSMG and low vertical growth. It is an ideal, sustainable mixture | New sowing: 25 - 35g/m ² Overseeding: 15 - 25g/m ² | 50% Perennial ryegrass • Torsion/Groundforce 20% Slender creeping red fescue • Cathrine 20% Chewings fescue • Eurocrown 10% Smooth stalked meadow grass • Enigma | ✓ TEES ✓ FAIRWAYS ✓ OUTFIELDS ✓ HARD-WEARING LAWNS |
| Our premium fairway mixture. Developed for situations requiring fine fescues and high shoot density. Combines good drought and salt tolerance with superior disease resistance. | New sowing: 25 - 35g/m ² Overseeding: 15 - 25g/m ² | 30% Slender creeping red fescue • Cathrine 30% Chewings fescue • Eurocrown 40% Strong creeping red fescue • Ryder | ✓ TEES ✓ FAIRWAYS ✓ OUTFIELDS ✓ FINELAWNS ✓ LANDSCAPING |
| A classic 80/20 seed mixture for establishing, renovating and transitioning fine turf. This blend of fescue/bent will produce beautiful dense turf which can be mown as low as 4mm. | New sowing: 25 - 35g/m ² Overseeding: 15 - 25g/m ² | 40% Slender creeping red fescue • Cathrine 40% Chewings fescue • Eurcrown 20% Browntop bent • Heritage | ✓ GOLF GREENS ✓ BOWLING GREENS ✓ FINE LAWNS ✓ CROQUET LAWNS |
| An all-purpose seed mixture containing Torsion, the self-repairing Perennial ryegrass created for golf tees, fairways, outfield and landscaping. This fine-leaved blend establishes quickly, offers good disease resistance and maintains its medium green colour throughout the year. Containing Torsion, the self-repairing Perennial ryegrass. | New sowing: 25 - 35g/m ² Overseeding: 15 - 25g/m ² | 50% Slender creeping red fescue • Cathrine 25% Chewings fescue • Eurocrown | ✓ GOLF GREENS ✓ BOWLING GREENS ✓ FINE LAWNS ✓ CROQUET LAWNS |
| An all-purpose seed mixture containing Torsion, the self-repairing Perennial ryegrass created for golf tees, fairways, outfield and landscaping. This fine-leaved blend establishes quickly, offers good disease resistance and maintains its medium green colour throughout the year. Containing Torsion, the self-repairing Perennial ryegrass. | New sowing: 35 - 50g/m ² Overseeding: 20 - 35g/m ² | 15% Slender creeping red fescue • Cathrine 15% Chewings fescue • Eurocrown 20% Strong creeping red fescue • Ryder 50% Perennial ryegrass • Torsion • Groundforce | ALL PURPOSE TEES FAIRWAYS OUTFIELDS LAWNS LANDSCAPING |
| A hard-wearing seed mixture designed for municipal sports fields. Ideal for both new establishment and renovations. this blend has a wide range of attributes, including rapid germination, excellent disease resistance and medium green colour aspect. | New sowing: 35 - 50g/m ² Overseeding: 20 - 35g/m ² | 80% Perennial ryegrass • Eurocordus • Eurosport-Carnac 20% Smooth stalked meadow grass • Enigma | ✓ FOOTBALL ✓ RUGBY ✓ LAWNS ✓ LANDSCAPING |
| A triple variety Agrostis capillaris blend, designed for overseeding golf and bowling greens. Each variety offers individual strengths but when combined, they form a highly competitive fine turf surface. | New sowing: 8g/m ² Overseeding: 5g/m ² | 100% Browntop bent • Jorvik • Manor • Troy | ✓ GOLF GREENS ✓ BOWLING GREENS |
| Riptide is the most recent introduction to the ICL bent grass portfolio. Any greenkeeper wishing to work with a top performing creeping bent will not be disappointed. Riptide is a truly all-round performing creeping bent grass. | New sowing: 8g/m ² Overseeding: 5g/m ² | 100% Creeping bent grass • Riptide | ✓ GOLF GREENS |
| Heritage is a new Browntop bent introduction to the STRI list and the ICL bent grass portfolio. Heritage offers high performance at low inputs. Excellent fusarium resistance combined with superior seed quality make Heritage an excellent choice for any greenkeeper. | New sowing: 8g/m ² Overseeding: 5g/m ² | 100% Browntop bent + Heritage | ✓ GOLF GREENS |



Our speciality products are designed to help you manage areas of landscaping, including tree and shrub plantings. They help create beautiful water features and assist in the effective application of spray treatments.

P



Speciality Products Contents

| Ranger | p102 |
|-----------------------|------|
| pHixer | p103 |
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Ranger®

Cleaning agent for use on hard surfaces

Ranger is a Hard Surface Cleaner for use on all hard surfaces including: concrete, asphalt, tarmac, block paving, artificial sports surfaces and any hard surface areas (except memorial marble/slate).

Ranger Benefits

- > Cleans and removes algae, slimes and lichens
- Reduces the risk of slippery surfaces
- Low application rates
- Economical to use

Product Characteristics

Type: Liquid Pack size: 1 litre & 5 litre Pack coverage: 500m² Contains: dodecyl dimethyl ammonium chloride, as well as a blend of organic acid and surfactants. HSE Number: 10045

Application Rate

Application rate: 1 litre treats 100m² Water Volume: 20 litres water per litre of product

Areas of Use

- ✓ Concrete
- Asphalt
- / Tarmac
- ✓ Block Paving
- ✓ Artificial Sports Surfaces
- All Hard Surfaces
 (except marble and slate)



pHixer

Specialist sprayer water conditioner with a built in pH colour indicator

The quality of the water used in spray solutions may have a significant impact on the performance of the pesticide being used. pHixer is a specialist water conditioner that adjusts spray tank water to an optimum pH level and contains an indicator dye which turns pink when the water has achieved the ideal pH range.

pHixer Benefits

- Reduces the negative impact of hard water on spray treatments
- > Treats water with high salinity
- Especially useful for herbicide, fungicide or foliar feed treatments in hard water areas
- Water turns pink when at the optimum pH level



Product Characteristics

Pack size: 5 litre Pack coverage: Variable

Application Rate

Application Rate: Variable Water Volume: Variable

Areas of Use

 Use whenever needed to optimise the condition of spray tank water in order to minimize the potential negative impact of dissolved carbonates on pesticide treatments.

Hard to very hard water area Medium to moderately hard water area Soft to moderately soft water area



SpOtless

Spray tank cleaning agent and general purpose cleaner

SpOtless is a highly formulated cleaning agent for the cleaning and decontamination of spraying equipment. It is especially effective at clearing sticky formulations.

SpOtless Benefits

- Maintains the effectiveness of spray equipment
- Decontaminates sprayer after use
- It is especially effective at clearing sticky formulations (sulfonylurea (Group B) and carfentrazone-ethyl (Group G) herbicides)

Product Characteristics

Pack size: 5 litre Packs per outer: 4 x 5 litre

Application Rate

General Purpose Cleaning: Use 250 ml in 100L of water

For decontamination of spray tank and cleaning of sticky formulations (sulfonylurea (Group B) and carfentrazone-ethyl (Group G) herbicides): Use 500 ml per 100 litres of water



Colour Pro

Advanced spray pattern indicator to assist spraying and minimize spray drift

Colour Pro[®] Indicator is an advanced spray pattern indicator formulated to provide the optimum conditions for the most accurate application of liquid sprays to turf and bare ground.

Colour Pro[®] Indicator Benefits

- Premium blue indicator
- Low-staining formulation
- > Contains anti-drift agent
- Sequestering agent to prevent lock up

Product Characteristics

Pack size: 1 litre Packs per outer: 6 x 1 litre





Rell **Recommended Period of Use** Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Contact www.icl-sf.co.uk www.icl-sf.ie

Speedway[®] Total

A blend of surfactants and spreaders that enhances total herbicidal activity and uptake.

Speedway Total is a spray adjuvant that contains a blend of surfactants and spreaders. It is designed to enhance the effect of glyphosate and other total and/or nonselective herbicide treatments.

Speedway Benefits

- Adjuvant to enhance total herbicide treatments
- Improves the speed of herbicide kill
- Enhances the uptake of herbicide to help control of difficult weeds
- Wide range of of fields of use*



Product Characteristics Pack size: 5 litre Packs per outer: 4 x 5 litre Application rate: Up to 2% v/v* Pack Coverage: Varies depending on dilution rate Contains: 37.0 % w/w alkoxylated alcohols and 41.0 % w/w alkoxylated alcohols ADJ No: 0820 PCS No: 92459




Syngenta. XC Turf Nozzles

Sprayer nozzles designed for accurate application and drift reduction.

The Syngenta XC Turf Nozzles have been specifically designed for use on golf courses and in amenity turf settings. They provide even spray distribution, improved leaf coverage and they greatly reduce drift to achieve more effective spray treatments.

XC Turf Nozzles Benefits

- Even spray distribution even on undulating ground
- > Air induction technology reduces drift
- More available spray days
- Designed for low rate applications

Product Characteristics

Pack size: 13 Nozzles per pack

Technical Specification

| | Foliar XC 025 | Foliar XC 04 | Soil XC 08 |
|----------------------------|------------------|-----------------|---------------|
| Orifice design | XC 110° | XC 127° | XC 127° |
| Backward inclination | 6.5° | 4.5° | 9.0° |
| Size | 025 | 04 | 08 |
| Operating speed | 3 - 4km/hr | 6 - 8km/hr | 6 - 8km/hr |
| Optimum nozzle height | 0.5m | 0.5m | 0.5m |
| Operating pressure | 2 - 4 ba | 2 - 4 bar | 2 - 4 bar |
| Optimum pressure | 2.5 bar | 2.5 bar | 2.5 bar |
| Typical spray volumes L/ha | 220 - 400 | 220 - 400 | 500 - 600 |

Which XC nozzle?

| Nozzle | Products | Target |
|------------------------|-----------------------------------------------------------------------------------------------|----------|
| Foliar XC 025 or 04 | Primo Maxx II, Headway, Banner Maxx II, Instrata, Heritage Maxx, Heritage, Medallion TL | Leaf |
| Soil XC 08 | Qualibra, Heritage Maxx, Heritage | ROOTZONE |

Speciality Products



ProCrystal®

For eco-friendly algae control in slow-moving water or lakes/ponds

ProCrystal is designed to control swimming or floating unicellular and filamentous algae found in ponds or enclosed expanses of water.

These algae develop in nutrient rich waters and are the main cause of oxygen depletion of the water following their decay. Apart from the aesthetic unpleasantness caused, they create a physical obstacle to activities such as irrigation, water sports, fishing or fish farming.

ProCrystal Benefits

- Improves the clarity of water within days
- Restores the natural balance of the target environment
- Available in hydrosoluble single-dose sachets for ease of application
- > Keeps irrigation ponds free from algae

Product Characteristics

Pack size: 454g water-soluble sachets Packs per outer: Nine sachets in one bucket Pack coverage: Variable Analysis: Inert powder inoculated by 6 strains of class 1 bacteria











Mode of Action

ProCrystal quickly consumes and degrades the excess nitrogen (nitrates and ammoniacal nitrogen) and phosphates that algae feed on to develop. The algae die swiftly after treatment by being deprived of the nourishment essential to their development.

Treatment Period

It is preferable to apply ProCrystal when algae start to develop or when conditions are suitable for their proliferation, generally from spring to the end of summer, and even early autumn.

Conditions for Use

Once applied, ProCrystal rapidly spreads throughout the volume of water. Continue applications to maintain water clarity throughout the desired period and when conducive to infestation.

Dose and Application

ProCrystal is used by distributing the unopened sachets uniformly on the surface of the water. It may be applied from the water's edge or from a boat. The sachets should be thrown directly onto the surface of the water requiring treatment.



Application Rate

| Depth | Application | Frequency | Dose per 100m ² | | |
|-------|---------------------------|--------------------|-------------------------------|--|--|
| < 1m | Initial application* | Every 30 days | 300g | | |
| < 111 | Maintenance application** | Every 30 - 60 days | 120g | | |
| > 1~ | Initial application* | Every 30 days | 500g | | |
| > 1m | Maintenance application** | Every 30 - 60 days | 200g | | |

*Continue applications until desired results are achieved.

**Continue applications to maintain desired appearance of water system throughout the growing season.

Recommended Period of Use

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | | | | | | | | |



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Landscaper Pro

The professional choice for lawns & landscapes

So advanced, so easy. Landscaper Pro provides landscapers and gardeners with a high quality range of of lawn care products.

Landscaper Pro Benefits

- > Value for money
- High nutrient content, so less fertilizer is required
- Optimal delivery of nutrients for enhanced turf quality
- Encourages a strong root system for health and resilience

Product Performance*

Granule dispersal: 8 days (visually dispersed from surface) Turf response: 7 days Longevity: 2 - 3 months *depending on environmental factors



The Landscaper Pro Range

| Feed, Weed & Mosskiller All-in-one granular weed, feed and mosskiller. Maintains growth and contains a selective herbicide for weed control plus iron for moss control. Spring & Summer 20-0-7 + 2CaO +3MgO (20-07 + 2CaO +3MgO (20-07 + 2CaO +3MgO (20-07 + 2CaO +2MgO (20-07 + 3CaO +2MgO + 3CaO +3CaO + 3CaO + 3Ca | Product Name Oxide Analysis (Elemental Analysis) | Technology/ Longevity | Product Notes | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------|--|
| Spring & Summer 20-0-7 + 2CaO +3MgO (20-0-5.8+1Mg)Image: Call and the second seco | Mosskiller 14-0-5 +Fe +herb | 6 Weeks | mosskiller. Maintains growth and contains a selective herbicide for weed | |
| 12-5-20 + 3CaO +2MgO (12-2.2-16+1.4Ca+1.2Mg)2-3growth that helps to prevent stress during cold winter months.Universtar Balance 15-5-15+2CaO+2MgO (15-2.2-12 + 1(a + 1.2Mg))2-3Developed as a convenient and cost-effective general purpose fertilizer for use on lawns, beds and | 20-0-7 + 2CaO +3MgO | Network Poly-S | release technology formulated to give a strong immediate response, combined | |
| 15-5-15+2CaO+2MgO 2-3 (15-2)-12 4 +1(a + 1 2Mg) 2-3 cost-effective general purpose fertilizer for use on lawns, beds and | 12-5-20 + 3CaO +2MgO | Naly-S 2-3 | growth that helps to prevent stress | |
| | 15-5-15+2CaO+2MgO | 2-3 | cost-effective general purpose fertilizer for use on lawns, beds and | |
| | | | | |



| | Nut | trient E | Break | down | | | | | | ient Le | | Bag Coverage | | | R | eco | nme | nde | nd Pe | eriod | ofl | lse | | |
|--------------------|-------------------|----------|------------|------|-----|-----|--------------|---------------------|--------------|--------------|--------------|--------------------|---|---|---|-----|------|------|-------|-------|-----|------|---|---|
| Total | Nitro | ogen | | | | | Bag Sizes | Application Rate | Аррі | ied (kg | g/na) | per m ² | | | | | mine | inac | .urt | | |).JC | | |
| N (% Coated) | N-NH ₄ | N-Urea | Total P | | MgO | CaO | (kg) | (g/m²) | N | Ρ | к | 25kg Bag | J | F | М | A | М | J | J | A | S | 0 | N | D |
| 14 | 10.9 | 3.1 | 0 | 5 | | | 15 | 35 | 49.0 | 0.0 | 17.5 | 428 | | | | | | | | | | | | |
| 20 (25%) | | 20 | | 7 | 3 | 3 | 15 | 25 35 | 50.0 70.0 | 0.0 0.0 | 17.5 24.5 | 600 430 | | | | | | | | | | | | |
| 12 (25%) | 1.3 | 10.7 | 5 | 20 | 2 | | 15 | 25 35 | 30.0 42.0 | 12.5 17.5 | 50.0 70.0 | 428 600 | | | | | | | | | | | | |
| 15 (41%) | 1.4 | 13.2 | 5 | 15 | 2 | 2 | 25 | 25 35 | 35.0 52.5 | 12.5 17.5 | 12.5 17.5 | 1,000 714 | | | | | | | | | | | | |



Suggested maintaince programmes for lawns

Nutritional programme

An effective nutrient programme for lawn and grass areas, applying ideal nutrient requirements over the course of a year.

AprilApply Landscaper Pro Spring & Summer at 35g/m²JuneApply Landscaper Pro Spring & Summer at 35g/m²SeptemberApply Landscaper Pro Autumn & Winter at 35g/m²

Nutritional programme + weed and moss control

An easy-to-use programme delivering nutrition when the plant needs it but also controlling weeds and moss in the spring.

April Apply Landscaper Pro Feed, Weed & Mosskiller at 35g/m²

JuneApply Landscaper Pro Spring & Summer at 35g/m²SeptemberApply Landscaper Pro Autumn & Winter at 35g/m²

Complete nutritional programme for grass, beds and borders

A simple one product programme for lawns, beds and borders.

| March | Apply Universtar Balance at 35g/m ² |
|-----------|------------------------------------------------|
| June | Apply Universtar Balance at 35g/m ² |
| September | Apply Universtar Balance at 35g/m ² |

Seeding a new grass area

A programme to help get your newly seeded grass area off to a great start.

| March | Apply Universtar Balance at 35g/m ² |
|--------|------------------------------------------------------------|
| | Apply Landscaper Pro Performance |
| | grass seed at 25g/m ² |
| May | Apply Landscaper Pro Spring & Summer at 35g/m ² |
| August | Apply Landscaper Pro Autumn & Winter at 35g/m ² |



For further information contact your ICL Technical Area Sales Manager or visit www.icl-sf.co.uk | www.icl-sf.ie



Landscaper Pro[®]

Controlled release fertilizer for trees and shrubs

The resin coating around each prill controls the daily nutrient release. Almost all the NPK is slowly made available for uptake by the plant and not lost into drains, ponds or ditches. The tablets are designed for use around pot-grown and fieldgrown trees, shrubs, newly planted stock and other soil-grown crops.

Sierrablen Flora Tablet Benefits

- Available as moulded tablets
- Feeds plants for two years from one application
- Predictable and reliable nutrient release



Product Characteristics

Pack size: 7kg Analysis: 15-9-9 +3Mg (15-3.9-7.5 +1.8Mg)



Csmocote[®] PrePlant

Pure power Osmocote fertilizer that provides full season nutrition.

Osmocote PrePlant has a consistent release pattern due to the unique ICL resin coated technology. providing nutrition when the plant needs it.

Osmocote PrePlant contains the ideal NPK and trace element package. This is suitable for the establishment and healthy growth of all plants trees and shrubs

Osmocote Exact Tablets Benefits

- Fully coated product ensures plants receive the feed when they need it
- Full trace element package
- For use on a wide range of trees, shrubs and plants

Product Characteristics

Pack size: 10kg Analysis: 17-9-10 +2MgO +TE (17-3.9-8.3 +2Mg +TE)



Contact

www.icl-sf.co.uk www.icl-sf.ie

Sierrablen[®] Flora

Controlled release fertilizer for trees and shrubs

One dressing of Sierrablen Flora applied over the root area of established plants, or incorporated in the soil in the planting hole during transplanting, will provide a continuous supply of essential nutrients throughout the growing season.

Sierrablen Flora Benefits

- Eliminates the need for repeated fertilizer dressings
- Minimises leaching even in pure sand
- > Longevity: 8 9 months
- Versatile feed for use in a wide range of areas

Product Characteristics

Bag size: 25kg Bag coverage: 180 - 355m² Analysis: 11-22-9 +6MgO (11-9.6-7.4 +6Mg)





Directions For Use

| Dressing | Rate of Use | | | | | |
|--------------|--------------------------------------------------------------------------------------------------------------|--|--|--|--|--|
| Base/top | 20 - 50g/m² | | | | | |
| Base/top | 5 - 10g per pit* | | | | | |
| Base/top | 10 - 30g per pit* | | | | | |
| Base/top | 30 - 60g per pit* | | | | | |
| Dressing | Rate of Use | | | | | |
| Base/top | 25 - 50g/m² | | | | | |
| Dressing | Rate of Use | | | | | |
| Base | 20 - 50g/m² | | | | | |
| Base/top | 30 - 60g/m² | | | | | |
| Planting/top | 35g per plant | | | | | |
| Тор | 60 - 120g/m² | | | | | |
| | Base/top Base/top Base/top Base/top Dressing Dressing Base/top Base/top Planting/top | | | | | |

Recommended Period of Use

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec



Levington®

Compost for tree planting and mulching

Levington TPMC – Tree Planting and Mulching Compost – has been designed to help overcome tree and shrub establishment problems. Formulated with sufficient nitrogen for early growth, together with phosphate, potassium and a full range of trace elements for rapid establishment and healthy growth.

Levington TPMC may be used in the planting hole, as a surface mulch after planting and for general soil improvement. Its pH of around 6.0 makes it suitable for a wide range of shrubs.

Levington TPMC Benefits

- Contains NPK fertilizers no further mixing necessary
- Retains water, air and nutrients for faster establishment
- Clean and easy to use no unpleasant odour

Product Characteristics

75 litre bags or loose in bulk by arrangement



Speciality Products

Directions For Use

Tree Planting

The amount of Levington TPMC required will vary depending on tree size. For whips allow 1 bag for about 4 - 5 trees; for specimens up to 3m tall allow two bags per tree.

Shrub Planting

Apply one bag of Levington TPMC per 5 - 6m² equivalent to 1,700 - 2,000 bags per hectare. Spread evenly and fork or rotovate into the top 10cm of soil.

Contact

www.icl-sf.co.uk

www.icl-sf.ie

Technical Information

The demand for better quality playing surfaces has never been higher

At ICL our focus is to deliver the best and most professional advice in the industry. Our reputation is built not just on quality products but also on the advice and technical support we give to our customers.



Technical Information Contents

| Spreaders | p118 |
|-----------------------------|------|
| Spreader Setting Guidelines | p120 |
| Tank-Mix Table | p122 |
| Ready Reckoner | p124 |

Spreaders

To get the very best results from your fertilizer, accurate application is essential

ICL spreaders are durable, easy-to-use, and offer turf managers the very best in application efficiency.

Spreader Index

| Spreader | Туре | Spread | Hopper | Product Usage | | | | | | | | | | |
|-----------------------|----------|------------|-----------|-----------------------------|-----------------------|----------------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|
| | | Width | Capacity | Conventional Fertilizers | Coated Fertilizers | Granular Wetting Agents | Seeds | Top Dressing | | | | | | |
| SR-2000 | Rotary | 2.0 - 6.0m | 42 litres | ✓ | v | ✓ | | Image: A set of the set of the | | | | | | |
| AccuPro 2000 | Rotary | 2.0 - 6.0m | 42 litres | v | ~ | v | | ✓ | | | | | | |
| SS-2 | Drop | 0.91m | 46 litres | v | | v | ✓ | ✓ | | | | | | |
| Classic Drop Spreader | Drop | 0.55m | 30 litres | ✓ | | V | ✓ | | | | | | | |
| HandyGreen II | Handheld | Variable | 2 litres | V | V | V | | | | | | | | |

Walking Pattern





Recommended walking pattern for drop and hand-held spreaders. Optimum distribution at half rate and double pass.

Helical Cone®



Optimal spreading due to the patented Helical Cone.

Top fertilizers need top spreaders

AccuPro 1000

Rotary Spreader

- 22cm pneumatic tyres
- Steel 'T' bar handle
 - Edgeguard technology
 - 18kg hopper capacity

AccuPro 2000

Rotary Spreader

- Large 136 Turf Saver 2 pneumatic tyres
- Durable large diameter frame
- Patented Helical Cone for a uniform, consistent spread pattern
 - Extended handle with tuff-foam grips for added comfort

SR-2000

Rotary Spreader

Has all the features of the AccuPro 2000 Rotary Spreader plus:

- Larger diameter, more durable stainless steel frame
 - Positive on-off side deflector provides effective product delivery control
 - Standard port shut-off control for greater application efficiency

SS-2

Drop Spreader

- Stainless steel frame, hopper and fasteners provide outstanding durability and corrosion resistance
 - Large 139 Turf Saver 2 pneumatic wheels for easy operator use
 - Extended ergonomic handle is more durable
 - Lift handles in the front and back for easier loading and unloading
 - Not suitable for coated controlled release products

Classic Drop Spreader

Drop Spreader

• Top-selling drop spreader with a 22-inch spread pattern holds 10,000 square feet of fertilizer

HandyGreen II

Spreader

• A hand-held spreader that disperses fertilizers as you turn the handle. Comfortable to hold and easy to use, it is suitable for small to medium lawns

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Spreader Setting Guidelines

To help with the accurate application of your fertilizer dressings

These recommended spreader settings are given for a walking speed of approximately 5km/hr. These settings are for guidance only.

Exact rates, using the settings here, cannot be guaranteed – rates depend on the spreader itself and accuracy of the operator. Calibrate the spreader at regular intervals, including effective spreading width.

Drop Spreader Settings for SS-1 and SS-2 Single Pass at FULL RATE

| | | Amount of Product Applied (g/m ²) After One Pass | | | | | | | | | | | |
|----------------------|----------------------------------------|--------------------------------------------------------------|------|------|------|----|----|----|----|----|----|----|--|
| | | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | |
| Greenmaster Pro-Lite | All Analyses | | 3¾ | 4 | 41⁄2 | 5 | 5¼ | 5½ | 6 | 6¼ | 6½ | | |
| Sportsmaster | All Analyses (not including CRF Range) | | 3¾ | 4 | 41⁄2 | 5 | 5¼ | 5½ | 6 | 6¼ | 6½ | | |
| SierraformGT | All Analyses | | 31⁄4 | 3¾ | 41⁄4 | 4¾ | 5¼ | 5¾ | 6¼ | 6½ | | | |
| STEP Hi-Mag | Trace Elements | 2 | 2¾ | 31⁄2 | | | | | | | | | |
| H ₂ Pro | Granules | | 3¾ | 4¼ | 4¾ | | | | | | | | |

Drop Spreader Settings for Classic Drop Spreader Single Pass at **FULL RATE**

| | | | Ar | nount | of Pro | duct A | pplied | l (g/m² | 2) Afte | r One Pa | SS | |
|--------------------|---------------|------|----|-------|--------|--------|--------|---------|---------|-----------|----|----|
| | | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 |
| SierraformGT | All Analyses | 4 | | 5 | 6 | | | | | | | |
| SierrablenPlus | All Analyses | | | | 6.75 | | 7.25 | | | | | |
| Sierrablen | All Analyses | | | | 13.0 | | 14.5 | | | 12.5 (x2) | | |
| H ₂ Pro | Wetting Agent | 6.25 | | | | | | | | | | |

| | Cone | Effective | | A | mou | nt of | Pro | duct | Appli | ied (g | g/m² |) Afte | r On | e Pas | ss | | Ĩ. | An | nour | nt of F | Produ | uct A | pplie | ed (g | /m²) / | After | Two | Pass | es | |
|-----------------------------|---------|-----------|---|------|------|-------|------|------|-------|--------|------|--------|-------|----------|----|----|----|------|------|---------|-------|-------|-------|-------|--------|-------|-----|------|----|------|
| | Setting | Width | | | 15 | | | | | | | | | | | 70 | 5 | | | | | | | | | | | 60 | | 70 |
| SierraformGT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| All Analyses | 6 | 3.7 | | 11/2 | К | L | Μ | M1⁄2 | | | | | | | | | | | Н | 11/2 | J½ | К | | | | | | | | |
| STEP | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STEP Hi-Mag | 7 | 4.3 | Н | 11/2 | K1⁄2 | | | | | | | | | | | | G½ | Н | Ι | | | | | | | | | | | |
| Greenmaster Pro-Lite | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| All Analyses | 6 | 3.7 | | | | | | Μ | Ν | | | | | | | | | | | | | J1⁄2 | К | | | | | | | |
| Sportsmaster | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| All Analyses | 4 | 3.7 | | | L | Μ | Ν | 01⁄2 | P1⁄2 | Q | R | S | Т | U | V | W | | | | | | L | L1⁄2 | Μ | M1⁄2 | Ν | 0 | O½ | Ρ | P1⁄2 |
| ProTurf | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| All Analyses | 6 | 5.0 | | | | N1⁄2 | O1⁄2 | Ρ | Q1⁄2 | | | | | | | | | | | K1⁄2 | L | Μ | Ν | | | | | | | |
| SierrablenPlus | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| All Analyses | 4 | 4.8 | | | Μ | Ν | 0 | Ρ | R | S | Т | | | | | | | | К | K1⁄2 | L | Μ | M1⁄2 | Ν | N1⁄2 | 0 | | | | |
| Sierrablen | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| All Analyses | 4 | 4.7 | | | | | Q | R1⁄2 | T1⁄2 | V | Х | Q(x2) | R(x2) | R1⁄2(x2) | | | | | | | Μ | Ν | 0 | O½ | Ρ | Q | R | R1⁄2 | | |
| H2Pro | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H ₂ Pro Granules | 5 | 4.0 | | J | K1⁄2 | Μ | | | | | | | | | | | | H1⁄2 | Ι | J | | | | | | | | | | |

Rotary Spreader Settings for AccuPro 2000, SR-2000, SR-1, R8-A Single Pass at **FULL RATE** Rotary Spreader Settings for AccuPro 2000, SR-2000, SR-1, R8-A Double Pass at **HALF RATE**

Fo

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Compatibility and Water Volumes

Tank-Mix Table

Guidance notes for tank-mix compatibility of ICL and Syngenta liquid formulations

- Do not exceed individual product rates. Do not exceed 120 L/ha for combined total Greenmaster Liquid product input or 60 L/ha for speciality Greenmaster Liquids (STEP/Effect Iron Fe/Ca-Booster).
- 2 Do not exceed individual product rates. Do not exceed 30 kg/ha for combined total Sportsmaster WSF product input for foliar applications (water volumes of 300 - 600 L/ha) or 60 kg/ha for drench applications (water volumes of 600 - 1,000 L/ha).

Key

- Fully compatible
- Compatible but outside recommended product water rates
- ✗ = Not compatible

| | | | | | | Green | master L | iquid 1 | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------------|--------------------|-----------|---------|---------|--------------------|----------------|----------------|----------------|---|
| | | | | High N | NK | High K | Spring & Summer | Ca- Booster | STEP Liquid | Effect Iron | |
| | | High N | 25-0-0+2MgO | | 11 | | | 11 | 11 | | |
| | | NK | 10-0-10+TE | 11 | | 11 | \$ | X | 11 | 11 | |
| | | High K | 3-3-10 + TE | 11 | 11 | | 11 | × | 11 | | |
| Liquid | Green- master | Spring & Summer | 12-4-6 +TE | 11 | 11 | 11 | | × | 11 | × | |
| Fertilizers | Liquid | | 8-0-0+11% CaO + TE | 11 | × | × | × | | 11 | × | |
| | | | uid micronutrient | 11 | 11 | 11 | 11 | 11 | | 11 | |
| | | Effect Irc | n | | | | × | × | 11 | | |
| | Sports- master | Liquid Fe | <u>)</u> | | | 11 | | × | | | ſ |
| | master | High N | | | | 11 | | 11 | 11 | 11 | |
| | | Spring 8 | Summer | 11 | 11 | 11 | 11 | × | × | × | |
| Water Soluble | Sports- master WSF 2 | High K | | 11 | 11 | 11 | | 11 | 11 | 11 | |
| Fertilizers | VVSF K | Iron | | 11 | 11 | × | × | × | 11 | × | |
| | | SeaMax | | | | 11 | | × | 11 | 11 | |
| | | H2Pro T | riSmart | 11 | 11 | 11 | 11 | 11 | 11 | 11 | |
| | | H2Pro F | lowSmart | 11 | 11 | 11 | 11 | 11 | 11 | 11 | |
| Wetting Agents | H ₂ Pro | H2Pro A | quaSmart | 11 | 11 | 11 | 11 | 11 | 11 | 11 | |
| | | H₂Pro [| DewSmart | × | × | × | × | × | × | × | |
| | | Qua | libra | 11 | 11 | 11 | 11 | 11 | 11 | 11 | |
| | | Blade | | 11 | 11 | 11 | 11 | × | 11 | × | ľ |
| | | SILK | | × | × | × | × | × | × | × | |
| BioStimulant | Vitalnova | AminoB | Boost | 11 | 11 | 11 | 11 | 11 | × | | Ì |
| | | Stressb | uster | 11 | 11 | 11 | × | | 11 | | Ì |
| | | SeaMax | < | | | 11 | | 11 | 11 | \ | |
| Plant Growth Regulator | | Primo | Maxx II | \$ | 11 | 11 | \$ | 11 | 11 | × | |
| , in the second se | | Heritag | e Maxx | 11 | 11 | 11 | 11 | 11 | 11 | × | |
| | | Meda | allion | | × | × | | × | 11 | × | |
| n | | Banner | Maxx II | | | | | | 11 | | |
| Fungicides | | Inst | rata | 11 | × | X | \$ | X | 11 | X | |
| | | Instrat | a Elite | 11 | 11 | 11 | 11 | 11 | 11 | 1 | Í |
| | | Head | dway | 11 | 11 | 11 | 11 | 11 | 11 | × | I |
| | | Jev | vel | 11 | 11 | 11 | 11 | 11 | 11 | 11 | |
| Herbicides | | Res | cue | 11 | × | × | × | × | 11 | × | |
| | | Pra | xys | 1 | 1 | 1 | 1 | × | 1 | 1 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | Technical Info |
|--------------|-----------|--------------------|------------------------|-----------|-----------|--------------------------------|---------------------------------|--------------------|-------------------|------------------------|--------------------|-------------------|------------------------|---------------------------|---------------------|------------------|------------------------|-------------|-------------------|-----------|-------------------|------------|-----------|-----------|----------|---------|-----------------------|
| Sportsmaster | | Sport | tsmaster | r WSF2 | | | Wet | ting Ager | its | | | | Biostimulan | ts | | PGR | | | Fung | icides | | | F | Herbicide | 25 | | |
| Liquid Fe | High N | Spring & Summer | High K | Iron | SeaMax | H ₂ Pro TriSmart | H ₂ Pro FlowSmart | H₂Pro AquaSmart | H₂Pro DewSmart | Qualibra | Vitalnova Blade | Vitalnova SILK | Vitalnova AmniBoost | Vitalnova Stressbuster | Vitalnova SeaMax | Primo Maxx II | Heritage Maxx | Medallion | Banner Maxx II | Instrata | Instrata Elite | Headway | Jewel | Rescue | Praxys | ALC: NO | |
| 55 | <i>\\</i> | 55 | | 55 | J | 55 | 55 | 55 | × | | 55 | × | 55 | 11 | 55 | J J | 11 | <i>\\</i> | 55 | 11 | 55 | 55 | <i>\\</i> | × | 1 | | |
| <i></i> | VV | <i>JJ</i> | VV <i>JJ</i> | <i>JJ</i> | VV | <i></i> | <i></i> | <i>JJ</i> | × | VV JJ | <i>JJ</i> | × | <i>JJ</i> | <i></i> | <i>JJ</i> | VV | VV <i>JJ</i> | × | <i></i> | × | <i>JJ</i> | <i></i> | VV | × | ✓ ✓ | | |
| <i>JJ</i> | | <i>JJ</i> | <i>s</i> , | × | <i>JJ</i> | <i></i> | <i>\\</i> | 11 | × | <i>s</i> , | <i></i> | × | <i>JJ</i> | 11 | <i></i> | | <i>\\</i> | × | <i>\\</i> | × | <i>JJ</i> | <i>\\</i> | <i>\\</i> | × | • • | | |
| <i>\\</i> | | <i>JJ</i> | 55 | × | <i>JJ</i> | <i></i> | 11 | 11 | × | <i>s</i> , | <i>JJ</i> | × | <i>JJ</i> | × | <i>JJ</i> | <i>\\</i> | <i>\\</i> | 55 | <i>\\</i> | <i>JJ</i> | <i>JJ</i> | <i>\\</i> | <i>\\</i> | × | • • | | |
| × | <i>s</i> | × | <i>s</i> | × | × | 11 | <i></i> | 11 | × | <i>s</i> | × | × | <i>JJ</i> | 11 | | <i>JJ</i> | <i>\</i> | × | <i>\\</i> | × | 11 | <i></i> | <i>\</i> | × | × | | |
|]] | <i>\</i> | × | <i>JJ</i> | 11 | 11 | 11 | 11 | 11 | × | <i>s</i> | 55 | × | × | 11 | <i>JJ</i> | 11 | <i>\\</i> | 55 | 11 | 11 | 11 | <i></i> | <i>\</i> | 11 | 1 | 1000 | 1000 |
| 11 | <i>\</i> | × | 11 | × | 11 | 11 | 11 | 11 | × | <i>JJ</i> | × | × | 55 | 11 | 11 | × | × | × | <i>\\</i> | × | ✓ | × | 11 | × | · · | | m |
| | | | | × | <i>\\</i> | <i>\\</i> | <i>\\</i> | | × | | \ | × | <i>\</i> | 11 | | | | × | <i>\\</i> | × | × | | × | 11 | 1 | | |
| <i>\\</i> | | 11 | | 11 | 11 | 11 | 11 | 11 | × | | | × | <i>√</i> | 11 | | 11 | | 11 | 11 | 11 | 11 | <i>\\</i> | 11 | × | × | | Colorest. |
| 11 | | | | 11 | 11 | | \ | | × | | \ | × | | 11 | | 11 | | × | | | | × | 11 | × | 1 | | |
| 11 | 11 | 11 | | 11 | 11 | 11 | 11 | 11 | × | × | \ | × | <i>√</i> | 11 | 11 | 11 | 11 | × | 11 | 11 | 11 | 11 | 11 | × | × | | |
| × | 11 | × | | | × | × | × | × | × | × | × | × | × | X | 11 | × | | × | \$ | | \ | × | × | × | × | | 11- |
| <i>\\</i> | 11 | 11 | \$ | × | | <i>\\</i> | × | 11 | × | X - | \ | <i></i> | <i>√√</i> | × | | 11 | \$ | <i>\\</i> | | 11 | <i>√√</i> | \$ | 11 | 11 | 1 | 1 | |
| \ | \ | \ | \ | × | \ | | × | \ | × | \ | \ | × | <i>√</i> | × | \ | \$\$ | \ | \ | \checkmark | \ | ✓ | \ | \ | \$ | 1 | 11 | |
| <i>\\</i> | \$ | \$ \$ | \$ | × | × | × | | 11 | <i>\\</i> | \$ | \ | × | \checkmark | × | \$ | \$\$ | \ | × | \$ | × | × | × | × | × | × | 110 | and the second second |
| <i>\\</i> | \ | \ | \ | × | \ | <i>\\</i> | <i>\\</i> | | × | \ | \ \ | × | <i>√√</i> | × | <i>\\</i> | \$ \$ | \ | \ | <i>s</i> | × | ~ | <i>\\</i> | | \ | 1 | | |
| × | × | × | × | × | × | × | <i>\\</i> | × | | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | | |
| <i>JJ</i> | <i>\\</i> | <i>JJ</i> | × | × | <i>JJ</i> | <i>\\</i> | <i>\\</i> | <i>JJ</i> | × | | <i>\\</i> | × | <i>√√</i> | 11 | <i>√√</i> | 11 | <i>\\</i> | 55 | <i>\\</i> | 55 | <i>√√</i> | <i>√√</i> | × | × | × | 144 | |
| <i></i> | <i>\</i> | <i>√</i> √ | <i>\</i> | × | <i>√</i> | <i></i> | <i></i> | <i></i> | × | <i></i> | | × | <i></i> | X | <i></i> | × | × | × | <i>\</i> | × | <i>√</i> √ | <i>\</i> \ | × | × | <i>✓</i> | 17.1 | |
| × | × | X | × | × | <i>√</i> | × | × | × | × | × | × | | × | × | × | × | × | X | X | × | X | × | X | × | × | * 11 | |
| <i>\</i> | <i>\</i> | <i>JJ</i> | <i>√√</i> | × | <i></i> | × | <i>\</i> | <i>\</i> | × | <i>√</i> | <i></i> | × | | \checkmark | <i>√</i> | <i>\</i> | <i>√√</i> | × | × | × | X | <i>\\</i> | × | × | X | | |
| | <i>JJ</i> | <i>JJ</i> | | × | × | <i>JJ</i> | × | × | × | <i>JJ</i> | × | × | | 11 | <i></i> | | × | × | <i>\\</i> | × | × | × | ~ | × | × | 1/1/ | |
| | \\ \\ | 55 55 | \\ \\ | √√ × | | \\ \\ | \\ \\ | - J.J - J.J | × | 55 55 | ر ۲ | × | \ \ \ | - 55 - 55 | <i>JJ</i> | <i>\\</i> |]]]] | \ \ \ | × | × √/ | \\ \\ | × √/ | × | × | ✓ × | | |
| | | <i>JJ</i> | VV | 55 | <i>JJ</i> | J | <i>JJ</i> | <i>JJ</i> | x | VV <i>JJ</i> | × | × | <i>JJ</i> | × | <i>JJ</i> | J | ~ ~ | J | \ \\ | × | <i></i> | × | x | x | × | NUL. | |
| × | J | × | × | × | <i>JJ</i> | <i></i> | × | <i>\\</i> | × | <i>s</i> , | × | × | × | × | <i></i> | VV | <i></i> | •• | <i>\\</i> | × | <i>JJ</i> | × | x | × | × | | |
| 11 | <i></i> | 11 | 11 | 11 | <i>JJ</i> | 11 | 11 | 11 | × | <i>JJ</i> | 55 | × | × | 11 | × | ✓ ✓ | <i>JJ</i> | 55 | | × | <i>JJ</i> | × | × | × | X | | |
| × | 11 | | 11 | 11 | × | 11 | × | × | × | <i>\\</i> | × | × | × | × | × | 11 | | × | × | | × | × | × | × | × | | |
| × | 11 | 11 | | 11 | | | × | 1 | × | 11 | <i>\\</i> | × | × | × | <i>\\</i> | | | <i>\\</i> | | × | | × | × | × | × | | |
| <i>\\</i> | | × | | | <i></i> | | × | 11 | × | | | × | × | × | × | 11 | × | × | × | × | × | | x | × | × | | |
| × | 11 | 11 | 11 | × | <i></i> | | × | 11 | × | × | × | × | × | × | × | × | × | × | × | × | × | × | | × | × | | |
| 11 | × | × | × | × | 11 | | × | 11 | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | | × | | |
| 1 | × | 1 | × | × | 1 | 1 | × | 1 | × | × | 1 | × | × | × | 1 | × | × | × | × | × | × | × | × | × | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Ready Reckoner

Nutrient application from granular fertilizers

Nutrient Calculations

Nutrient application from granular fertilizers

Calculation of amount of nutrient applied from declared analyses and treatment rate. The fertilizer declarations are always expressed as % weight by weight, with nutrients being declared in the oxide form in the UK.

Therefore, a 14-5-10 fertilizer contains: 14% w/w N 5% w/w P₂O₅ 10% w/w K₂O

Granular fertilizers

For calculating nutrient inputs for granular fertilizer, use the following formula:

Application rate (kg/ha) x (% nutrient/100) = kg nutrient/ha

Example: 14-0-0 @ $35g/m^2$ Convert application rate from g/m² to kg/ha (i.e. $35g/m^2 \times 10 = 350$ kg/ha) Multiply product rate (kg/ha) by % N content (i.e. 14% N = 0.14) = kg N per ha (i.e. $350 \times 0.14 = 49$ kg N/ha)

Liquid fertilizers

In order to calculate the nutrient inputs from Greenmaster Liquid fertilizers, you need to use the Specific Gravity (kg/litre) of the particular product being used.

Specific Gravity (SG) of: NK 1.23 High N 1.31 Spring & Summer 1.18 High K 1.18 Ca Booster 1.32 STEP Liquid 1.15 Effect Iron Fe 1.25 Vitalnova Blade 1.36

For calculating nutrient inputs for liquid fertilizers, use the following formula:

Application rate (L/ha) x Specific Gravity (SG) x (% nutrient/100) = kg nutrient/ha

Example: 12-4-6 @ 60 L/ha (SG = 1.18 kg/L) Convert application rate from L/ha to kg/ha (i.e. 60 L/ha 1.18 = 70.8 kg/ha) Multiply product rate (kg/ha) by % N content (i.e. 12% N = 0.12) = kg N per ha (i.e. 70.8 x 0.12 = 8.5kg N/ha)

Ready Reckoner

| Nutrient Analysis | Kg Nut | rient/ha <i>l</i> | Applied a | t These A | pplicatio | n Rates |
|-----------------------------------------------------------|--------|-------------------|-----------|-----------|-----------|---------|
| %N. P ₂ O ₅ . K ₂ O etc. | 20 | 30 | 35 | 70 | 105 | 140 |
| Declared | g/m² | g/m² | g/m² | g/m² | g/m² | g/m² |
| 1 | 2.0 | 3.0 | 3.5 | 7.0 | 10.5 | 14.0 |
| 2 | 4.0 | 6.0 | 7.0 | 14.0 | 21.0 | 28.0 |
| 3 | 6.0 | 9.0 | 10.5 | 21.0 | 31.5 | 42.0 |
| 4 | 8.0 | 12.0 | 14.0 | 28.0 | 42.0 | 56.0 |
| 5 | 10.0 | 15.0 | 17.5 | 35.0 | 52.5 | 70.0 |
| 6 | 12.0 | 18.0 | 21.0 | 42.0 | 63.0 | 84.0 |
| 7 | 14.0 | 21.0 | 24.5 | 49.0 | 73.5 | 98.0 |
| 8 | 16.0 | 24.0 | 28.0 | 56.0 | 84.0 | 112.0 |
| 9 | 18.0 | 27.0 | 31.5 | 63.0 | 94.5 | 126.0 |
| 10 | 20.0 | 30.0 | 35.0 | 70.0 | 105.0 | 140.0 |
| 11 | 22.0 | 33.0 | 38.5 | 77.0 | 115.5 | 154.0 |
| 12 | 24.0 | 36.0 | 42.0 | 84.0 | 126.0 | 168.0 |
| 13 | 26.0 | 39.0 | 45.5 | 91.0 | 136.5 | 182.0 |
| 14 | 28.0 | 42.0 | 49.0 | 98.0 | 147.0 | 196.0 |
| 15 | 30.0 | 45.0 | 52.5 | 105.0 | 157.5 | 210.0 |
| 16 | 32.0 | 48.0 | 56.0 | 112.0 | 168.0 | 224.0 |
| 17 | 34.0 | 51.0 | 59.5 | 119.0 | 178.5 | 238.0 |
| 18 | 36.0 | 54.0 | 63.0 | 126.0 | 189.0 | 252.0 |
| 19 | 38.0 | 57.0 | 66.5 | 133.0 | 199.5 | 266.0 |
| 20 | 40.0 | 60.0 | 70.0 | 140.0 | 210.0 | 280.0 |
| 21 | 42.0 | 63.0 | 73.5 | 147.0 | 220.5 | 294.0 |
| 22 | 44.0 | 66.0 | 77.0 | 154.0 | 231.0 | 308.0 |
| 23 | 46.0 | 69.0 | 80.5 | 161.0 | 241.5 | 322.0 |
| 24 | 48.0 | 72.0 | 84.0 | 168.0 | 252.0 | 336.0 |
| 25 | 50.0 | 75.0 | 87.5 | 175.0 | 262.5 | 350.0 |

Note: $35 \text{ per m}^2 = 350 \text{kg per ha} = 1 \text{ oz. per sq yd} = 2.7 \text{ cwt per acre}$ Note: 50 kg per ha = 0.38 cwt per acre = 43 lbs per acreNote: 1 kg per ha = 0.86 lbs per acre

Ounces per square yard to grammes per square metre

| oz per sq.yd | 1⁄4 | 1⁄2 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 15 | 20 |
|--------------|-----|-----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| g per m² | 8.5 | 17 | 34 | 68 | 102 | 136 | 170 | 204 | 238 | 272 | 306 | 340 | 510 | 680 |

Fluid ounces per square yard to millilitres per square metre

| fl.oz per sq.yd | 1⁄4 | 1/2 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 15 | 20 |
|-----------------|-----|-----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| ml per m² | 8.5 | 17 | 34 | 68 | 102 | 136 | 170 | 204 | 238 | 272 | 306 | 340 | 510 | 680 |

Weight

| Weight | pounds | to kilogrammes | divide by | 2.205 | kilogrammes | to pounds | multiply by | 2.205 |
|---------|--------------|------------------------|-------------|--------|---------------------|-----------------|-------------|--------|
| | tonnes | to tonnes | multiply by | 1.016 | tonnes | to tonnes | divide by | 1.016 |
| | cwts | to kilogrammes | multiply by | 50.794 | kilogrammes | to cwts | divide by | 50.794 |
| Area | acres | to hectares | divide by | 2.471 | hectares | to acres | multiply by | 2.471 |
| | square yards | to square metres | multiply by | 0.8361 | square metres | to square yards | divide by | 0.8361 |
| Volume | pints | to litres | multiply by | 0.568 | litres | to pints | divide by | 0.568 |
| | litres | to gallons | divide by | 4.546 | gallons | to litres | multiply by | 4.546 |
| Weight/ | tonnes/acre | to tonnes/hectare | multiply by | 2.51 | tonnes/hectare | to tonnes/acre | divide by | 2.51 |
| Area | cwts/acre | to tonnes/hectare | divide by | 8.00 | tonnes/hectare | to cwts/acre | multiply by | 8.00 |
| | cwts/acre | to kilogrammes/hectare | multiply by | 125.00 | kilogrammes/hectare | to cwts/acre | divide by | 125.00 |
| Volume/ | pints/acre | to litres/hectare | divide by | 0.712 | litres/hectare | to pints/acre | multiply by | 0.712 |
| Acre | gallons/acre | to litres/hectare | multiply by | 11.233 | litres/hectare | to gallons/acre | divide by | 11.233 |
| | lbs/cu.ft | to kg/cu.m | multiply by | 16.052 | kg/cu.m | to lbs/cu.ft | divide by | 16.052 |

| Length | 1 metre (100cm) | 3.281 feet | | | | |
|-------------|--------------------------------------------------------------------------------|---------------------|--|--|--|--|
| | | 1.094 yards | | | | |
| Area | square metres | 1.196 square yards | | | | |
| | 1 hectare (10,000m ²) | 2.471 acres | | | | |
| Volume | 1 litre (1,000 ml) | 35.211 fluid ounces | | | | |
| | | 1.76 pints | | | | |
| Weight | 1 gramme | 0.0353 ounces | | | | |
| Ū | 1 kilogramme | 35.2074 ounces | | | | |
| | | 2.205 lbs | | | | |
| Temperature | Degree Centigrade (°C) to Degree Fahrenheit (°F) multiply by 1.8 and add 32 | | | | | |

For further information contact your ICL Technical Area Sales Manager or visit www.icl-sf.co.uk | www.icl-sf.ie

Typical Areas of Use

| Golf Green | | 365 - 640m² | 400 - 700 sq.yds |
|----------------|---------|------------------------------------|---------------------------|
| Bowling Green | | 38.4 x 38.4m 42.0 x 42.0 sq.yds | 1,475m² 1,764 sq.yds |
| Cricket Square | | 27.4 x 27.4m 30.0 x 30.0 yds | 752m² 900 sq.yds |
| Tennis Court | (reg) | 23.8 x 11.0m 26.0 x 12.0 yds | 262m² 312 sq.yds |
| | (full) | 36.6 x 18.3m 40.0 x 20.0 yds | 670m² 800 sq.yds |
| Lacrosse | | 137.0 x 73.0m 150.0 x 80.0 yds | 10,001m² 12,000 sq.yds |
| Football Pitch | (small) | 91.4 x 46.0m 100.0 x 50.0 yds | 4,204m² 5,000 sq.yds |
| | (large) | 119.0 x 91.4m 130.0 x 100 yds | 10,877m² 13,000 sq.yds |
| Rugby Pitch | | 100.0 x 69.0m 110.0 x 75.0 yds | 6,900m² 8,250 sq.yds |
| Hockey Pitch | (small) | 91.4 x 50.0m² 100.0 x 55.0 yds | 4,570m² 5,500 sq.yds |
| | (large) | 91.4 x 55.0m² 100.0 x 60.0 yds | 5,027m² 6,000 sq.yds |
| Croquet | | 32.0 x 26.0m² 35.0 x 28.0 yds | 832m² 980 sq.yds |
| GAA | (small) | 130.0 x 80.0m 142.0 x 87.0 yds | 10,400m² 12,354 sq.yds |
| | (large) | 145.0 x 90.0m 158.0 x 98.0 yds | 13,050m² 15,484 sq.yds |

| Notes | |
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| | Notes |
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Contact Details

Turf & Landscape Sales Team

To place your order, please contact your local ICL distributor or ICL representative



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