15-5-15 Cal-Mag

PRODUCT FEATURES

- This product is covered by one or more of the following US patents or foreign counterparts thereof: 5,171,349; 5,395,418; 5,492,553
- Best for water with low to medium alkalinity at or below 150 ppm $CaCO_3$ (150 mg $CaCO_3$/l)
- Combines high nitrate nitrogen, phosphorus, potassium, calcium, magnesium and elevated minor elements in one product for soilless mixes
- Can be mixed with all Miracle-Gro EXCEL products

STOCK NO. 91940

- Combats effects of high sodium in irrigation water especially when coupled with moderate to high alkalinity
- Ideal for potted, bedding (including plugs) and cut flowers where additional calcium and magnesium are required
- 100 ppm nitrogen solution supplies 33 ppm calcium and 13 ppm magnesium
- Maximum solubility 3 lb./gal.
- Excellent for plug production

GUARANTEED ANALYSIS

For Continuous Liquid Feed Programs

Total Nitrogen (N)	15%
1.20% Ammoniacal Nitrogen	
11.75% Nitrate Nitrogen	
2.05% Urea Nitrogen	
Available Phosphate (P_2O_5)	5%
Soluble Potash (K_2O)	15%
Calcium (Ca)	5%
Magnesium (Mg)	2%
2.0% Water Soluble Magnesium (Mg)	
Boron (B)	0.015%
Copper (Cu)	0.007%
0.007% Water Soluble Copper (Cu)	
Iron (Fe)	0.075%
0.075% Chelated Iron (Fe)	
Manganese (Mn)	0.037%
0.037% Water Soluble Manganese (Mn)	
Molybdenum (Mo)	0.007%
Zinc (Zn)	0.040%
0.040% Water Soluble Zinc (Zn)	

Derived from: Ammonium Nitrate, Calcium Nitrate, Potassium Nitrate, Urea Phosphate, Magnesium Nitrate, Boric Acid, Copper Sulfate, Iron EDTA, Manganese Sulfate, Ammonium Molybdate, Zinc Sulfate.

Potential Basicity: 141 lb. Calcium Carbonate equivalent per ton.

Warning: Fertilizer contains more than .001% Molybdenum. It should not be used on forage grass for livestock.

Distributed By:

The Scotts Company
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PROFESSIONAL HORTICULTURE

Water Soluble Fertilizers

Miracle-Gro® EXCEL® 15-5-15 Cal-Mag
Water Soluble Fertilizer
(Suggestions for Commercial Growers)

100 ppm N Solution Contains the Following Elemental ppm		
Ammonium-N	(NH_4 – N)	8.0
Nitrate-N	(NO_3 – N)	78.3
Urea-N	(Urea-N)	13.7
Phosphorus	(P)	14.7
Potassium	(K)	83.0
Calcium	(Ca)	33.3
Magnesium	(Mg)	13.3
Boron	(B)	0.100
Copper	(Cu)	0.047
Iron	(Fe)	0.500
Manganese	(Mn)	0.247
Molybdenum	(Mo)	0.047
Zinc	(Zn)	0.266

Crop Type	Continuous Feeding ppm N (Constant Liquid Feeding)	Periodic Feeding ppm N (Pulse Feeding)
Bedding Plants	50–150	150–250
Containerized Woody Plants	50–100	200–350
Cut Flowers	175–225	300–450
Potted Chrysanthemums	200–300	350–400
Potted Easter Lilies	200–300	350–400
Potted Tropical Foliage	150–200	250–300
Potted Geraniums	200–300	350–400
Potted Poinsettias	200–300	350–400
Plugs (All Types)	50–125	175–225

Ounces of Miracle-Gro EXCEL 15-5-15 Per Gallon of Concentrate

Concentration (ppm)			Injector Ratios*					Electrical Conductivity (E.C.)**
N	Ca	Mg	1:15	1:100	1:128	1:200	1:300	mmhos/cm
25	8.3	3.3	0.34	2.25	2.88	4.50	6.75	0.17
50	16.7	6.7	0.68	4.50	5.76	9.00	13.50	0.33
75	25	10.0	1.00	6.75	8.64	13.50	20.25	0.50
100	33.3	13.3	1.35	9.00	11.52	18.00	27.00	0.66
150	50	20.0	2.03	13.50	17.28	27.00	40.50	0.99
200	66.7	26.7	2.70	18.00	23.04	36.00	***	1.32
300	100	40.0	4.05	27.00	34.56	***	***	1.98
400	133.3	53.4	5.40	36.00	46.08	***	***	2.64

Approximate Gallons Required to Dissolve One 25 lb. Bag of 15-5-15

Concentration (ppm)			Injector Ratios	
N	Ca	Mg	1:100	1:200
25	8.3	3.3	180	90
50	16.7	6.7	90	45
75	25.0	10.0	60	30
100	33.3	13.3	45	22.5
150	50.0	20.0	30	15
200	66.7	26.7	22.5	11.3
300	100.0	40.0	15	***
400	133.3	53.4	11.3	***

* Use the oz./gal. to obtain suggested or desired ppm N, Ca or Mg. To customize, values are additive. For example, if 275 ppm N is desired, using a 1:100 injector, add 18 oz. (200 ppm N) and 6.75 oz. (75 ppm N) to yield 24.75 oz./gal. concentrate. To convert oz./gal. to grams/liters, multiply by 7.5.

** E.C. measurements do not include E.C. of plain water. Since Miracle-Gro EXCEL technology fertilizers reduce overall water alkalinity, the electrical conductivity (E.C.) of fertilizer solutions may be slightly affected. For more information contact your Scotts representative or Scotts Customer Service at 1-800-492-8255 or the Scotts Testing Laboratory at 1-800-743-4769. E.C. calculations are based upon a 100 ppm nitrogen solution with a water alkalinity of less than 100 ppm $CaCO_3$ (100 mg $CaCO_3$/l).

***Limit of solubility 3.0 lbs./gal. (48 oz./gal.) Dissolves fast with hot water.

SUGGESTIONS FOR USE

The chemical composition of the irrigation water applied to crops has a major influence on the nutrients available to plants in the long term. Before selecting and/or designing a fertilizer program, first test the irrigation water to better understand pH and alkalinity.

Do not mix Miracle-Gro® EXCEL® fertilizers in the concentrate with fertilizers containing ammonium phosphates or potassium phosphates, such as regular Peters Professional® Water Soluble Fertilizer or other brands of water soluble fertilizers.

In concentrated solution, do not mix calcium-containing fertilizers with sulfuric acid or sulfate containing fertilizers such as Peters S.T.E.M. or Epsom Salts (magnesium sulfate).

Continuous feeding is recommended over periodic or pulse feeding as this practice provides a more uniform and optimal feed program.

Use a reputable laboratory such as the Scotts Testing Laboratory for more reliable media, solution and tissue test results.

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