Universol®

Hard Water 211

23-10-10+2MgO+TE



pH Control | Hard Water Special | Trace Elements (Fe, Mo, Cu, Zn, B, Mn) | Bright Solution System

Product Information

Universol is a high quality compound NPK water soluble fertilizer offering growers real value for money. it is suitable for use with pot and bedding plants as well as container nursery stock.

Universol Hard Water 211 is developed for application in hard irrigation water. This product contains NPK, Mg and a full package of trace elements.

The product is ideal for compact growth (flowering plants) and hardening off plants. Thanks to the N:K ratio of 2:5, this product can be used in combination with water containing high nitrogen levels and with nitrogen fertilizers (e.g. Nitric acid). Universol Hard Water 211 acidifies the irrigation water and neutralizes bicarbonate. This product is not recommended in soft water types, like rain water.

Universol Hard Water 211 cannot be mixed in the same tank with other Universol products, other compound NPK fertilizers or fertilizers containing phosphate (except for phosphoric acid). To ensure that this product dissolves completely, prepare the stock solution 1-2 hours before use and stir well.

Guaranteed analysis

23%	**TOTAL NITROGEN (N)**
	11.2% nitrate nitrogen (NO_3-N)
	8.2% ammoniacal nitrogen (NH_4-N)
	4.0% ureic nitrogen (Urea-N
10%	**PHOSPHORUS PENTOXIDE (P_2O_5)**
	Soluble in neutral ammonium citrate and in water
	10.0% water soluble
10%	**POTASSIUM OXIDE (K_2O)**
	10.0% water soluble
2.0%	MAGNESIUM OXIDE (MgO)
4.0%	SULPHUR TRIOXIDE (SO_3)
0.01%	Boron (B)
0.010%	Copper (Cu) chelated by EDTA
0.12%	Iron (Fe) chelated by EDTA
0.04%	Manganese (Mn) chelated by EDTA
0.001%	Molybdenum (Mo)
0.010%	Zinc (Zn) chelated by EDTA

Product characteristics

EC at 1 g/l (25°C)	: 1.4 mS/cm (measured in water with 50mg/l HCO_3)
	: 1.3 mS/cm (measured in water with >150mg/l HCO_3
Maximum solubility (25°C)	: 33 kg / 100 liter water
Acidity/Basicity	: -0.381 kg $CaCO_3$/kg Universol.
Effect on growing media pH	: Acidifying*
Bicarbonate reduction at 1 g/l	: 89 mg/l HCO_3
Packaging details	: 25 kg, plastic bag
Product code	: 2032

Bright Solution System – unique in Universol

Universol fertilizers are the only fertilizers with the unique 'Bright Solution System'.
This addition ensures a crystal clear solution and therefore optimal availability of nutrients for the plant. The Bright Solution System keeps the irrigation system clean and thus makes sure that the system performs smoothly.

Feature and benefits of Universol Hard Water 2:1:1

- Contains all elements; NPK, magnesium and trace elements
- Always the same composition thanks to stringent quality control
- Quick effect due to strong, fast performance
- Dissolves entirely and quickly because of the special ingredients and the 'Bright Solution System'
- Excellent price / quality ratio
- Always a suitable analysis for your crop
- Improves the quality of your irrigation water, by taking out bicarbonates
- The pH of the soil remains stable as a result of the HCO_3- buffering effect

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Recommended Universol rates for pot and bedding plants		
	100 % Universol	50 % Universol 50 % Osmocote
Crops with high fertilizer requirements	1-2 g/l	0.5-1 g/l
Crops with normal fertilizer requirements	1-1.5 g/l	0.5-0.75 g/l
Salt sensitive crops	0.5-1 g/l	Depends on situation

Recommended Universol rates for container nursery stock crops		
Crops with high fertilizer requirements	20 g/m^2/week	10 g/m^2/week
Crops with normal fertilizer requirements	15 g/m^2/week	7.5 g/m^2/week
Salt sensitive crops	10 g/m^2/week	5 g/m^2/week

Possible to mix Universol Hard Water 211 with:	Mixable?
Calcium nitrate	no
Potassium nitrate	yes
Magnesium nitrate	yes
Magnesium sulphate	yes
Phosphoric acid	yes
Nitric acid	yes
Universol Soft Water	no
Universol Hard Water	yes
Universol White	no
Universol Special P	no
Universol Standard range	no
Other compound water soluble fertilizers	no

	Universol	Analysis	NPK ratio	Purpose of the formula
Standard range	Violet	10-10-30+3.3MgO+TE	2:2:6	High potassium to provide compact and strong early growth, good leaf color, strong growth without extension and good flower development.
	Yellow	12-30-12+2.2MgO+TE	1:3:1	Boosts root growth and shoots bud growth.
	Blue	18-11-18+2.5MgO+TE	3:2:3	Well-balanced growth in mid-season.
	Green	23-6-10+2.7MgO+TE	4:1:2	Nitrogen for extra growth.
	Orange	16-5-25+3.4MgO+TE	3:1:5	Formula for slower growth, particularly suitable for flowering plants.
	Basis	4-19-35+4.1MgO+TE	1:5:9	This fertilizer has been specially developed for combination in A-B tank systems. Also suitable for hardening off plants.
	White	15-0-19+9CaO+2MgO+TE	4:0:5	No phosphate product with calcium. Designed for application in P-reduced growing systems in soft water.
	Special 104	9-0-39+3.5MgO+Te	1:0:4	Specially developed for application where P-level is used to grow compact plants.
	Special P	19-6-27+TE	-	Product, containing special poly-phosphates, for strong performance.
Hard Water range	Hard Water 211	23-10-10+2MgO+TE	2:1:1	Nitrogen aimed product for growth and reduction of bicarbonates in hard water conditions.
	Hard Water 225	11-10-28+2MgO+TE	2:2:5	Potassium aimed product for compact growth in hard water conditions. Also for use in combination with hard water containing nitrogen.
Soft Water range	Soft Water 312R	18-7-12+6CaO+2MgO+TE	3:1:2	Nitrogen aimed product with calcium for growth in soft water conditions.
	Soft Water 113R	11-11-31+2CaO+2MgO+TE	1:1:3	Potassium aimed product for quick corrections of potassium and for application in the end phase of the crop. For soft water conditions.
	Soft Water 213R	14-7-22+5CaO+2MgO+TE	2:1:3	Potassium aimed product for compact growth in soft water conditions.

Attention

Store the product in a cool, dry and ventilated place.

As circumstances can differ and as application of products is beyond our control, ICL Specialty Fertilizers cannot be held responsible for any negative results. With this publication, all previously given recommendations expire.

Before a new rate, product or application method is used, a small-scale trial is recommended.

Ask your local ICL Distributor or the ICL Technical Area Sales Manager for more information or recommendations.

Consult **www.icl-sf.co.uk/.ie** for your contact in the region.

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