



Universol®

Hard Water 146



Specific nutrition for hard water, when extra potassium is needed

6	21	35	2.0	TE
N	P ₂ O ₅	K ₂ O	MgO	

Description

Universol HW or Hard Water is a water-soluble fertilizer designed for use when irrigating with hard water. This is often groundwater or well water, which may contain excess calcium, magnesium and bicarbonates. This leads to poor solubility of fertilizers and high EC values of the water, which inhibits the uptake of essential nutrients that remain unavailable in the root zone, precipitate in the tank and block the irrigation system. To avoid these problems, water-soluble fertilizers specific for hard water should be used. Universol Hard Water 146, with a high potassium content, has been specifically designed for the final stage of cultivation. Made from carefully selected raw materials with an exceptional acidifying effect. Simple and efficient to use and mix with other Universol Hard Water products. Not recommended for use with rainwater. Like all fertilizers in the Universol range, it contains the Bright Solution System technology that maximizes the availability of nutrients and prevents the blockage of the irrigation system.

Guaranteed analysis

Oxide

N	Total Nitrogen	6%
	Nitrate nitrogen (N-NO ₃)	5.6%
	Ammoniacal nitrogen (N-NH ₄)	0.4%

P ₂ O ₅	Phosphorus Pentoxide	21%
	Water soluble (P ₂ O ₅)	21%
K ₂ O	Potassium Oxide	35%
	Water Soluble (K ₂ O)	35%
MgO	Magnesium Oxide	2%
	Water soluble (MgO)	2%
B	Boron	0.01%
	Water soluble (B)	0.01%
Cu	Copper	0.01%
	Water soluble (Cu)	0.01%
	Copper EDTA (Cu)	0.01%
Fe	Iron	0.12%
	Water soluble (Fe)	0.12%
	Iron EDTA (Fe)	0.12%
Mn	Manganese	0.04%
	Water soluble (Mn)	0.04%
	Manganese EDTA (Mn)	0.04%
Mo	Molybdenum	0.001%
	Water soluble (Mo)	0.001%
Zn	Zinc	0.01%
	Water soluble (Zn)	0.01%
	Zinc EDTA (Zn)	0.01%

Benefits

🌊 Easy to apply, safe to use, fast-acting

🌊 Improves water quality and increases the plant's nutrient uptake capacity

- Acidifying effect that partially reduces bicarbonates in water and stabilizes soil pH
- Excellent water solubility for a cleaner and more efficient irrigation system
- It contains a complete package of microelements and has a good supply of Fe
- Contains Bright Solution System technology

Application rates

Recommended Universol rates	100% Universol	50% Universol*
Pot and bedding plants:		
Crops with high fertilizers 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
Container nursery stock:		
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

*When combined with 50% Osmocote® Exact

****Attention****

Trial first on a small scale before changing the rate, application or any other variables. As circumstances can differ and the application of our products is beyond our control, ICL cannot be held responsible for any adverse results. Store under dry conditions. Close partly used or damaged bags securely. For best results, always ask your ICL advisor.

How to use

1

Prepare the stock solution 1-2 hours before use and stir well.

- 2 Use in clean irrigation systems only, as the product's anti-clogging effect can release any deposits in the pipes, which can cause blockages in the system.
- 3 Do not mix with other P-containing compound fertilizers except of phosphoric acid
- 4 Do not mix with Ca-containing fertilizers.
- 5 This product is not recommended for application in soft water types or rainwater.
- 6 If you need more information, please contact your technical support.

Technologies



The Bright Solution System, exclusive to Universol® water-soluble fertilizers, combines carefully selected components with pH-regulating and chelating properties to enhance nutrient solubility and uptake. This advanced system ensures rapid and complete dissolution, preventing irrigation blockages and maximizing nutrient availability.

[Learn more](#)

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<https://icl-growingsolutions.com/ornamental-horticulture/products/hard-water-146/>

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