



# Haifa Catalog

## Pioneering Products



**Haifa**

Pioneering the Future

By combining **vision and leadership,**  
**technology and innovation,**  
Haifa has become the **quintessential**  
**world expert** in specialty fertilizers  
delivering **exceptional products.**

**Haifa. Pioneering the Future.**



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# Pioneering the Future

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Haifa is an Israel-based multinational corporation and a global leading supplier of Potassium Nitrate, Specialty Plant Nutrients and Industrial Chemicals. Haifa has an expansive worldwide presence that enables it to keep in close contact with customers and end-users. With three production plants and several logistic facilities, Haifa's products are distributed across 5 continents through 14 subsidiaries and a global network of agents and distributors. Finely attuned to market trends and customer needs, Haifa is a stable, well-established company delivering faultless yet flexible performance with customized products, solutions and services.

In today's rapidly evolving world, as modern agriculture continuously strives to create maximum yields at minimum production costs, reducing mankind's environmental footprint is a constant priority. At Haifa we have linked this global challenge to our key mission which has always been about creating highly effective solutions for farmers' benefits worldwide. Thus as we drive cutting-edge, inspirational solutions to meet the growing challenges of a changing world, we are developing innovative products designed to enhance plant nutrition and boost growers' profit while minimizing environmental harm.



# Pioneering Solutions

Haifa develops and produces soluble fertilizers for Nutrigation™ and foliar sprays, controlled release fertilizers and granular fertilizers for soil application. Haifa's agriculture solutions maximize yields from given inputs of land, water and plant nutrients for diverse farming practices. With innovative plant nutrition schemes and highly efficient application methods, Haifa's solutions provide balanced plant nutrition at precise dosing, composition and placing. This ultimately delivers maximum efficiency, optimal plant development and minimized losses to the environment.

## Nutrigation™



Nutrigation™ (fertigation) delivers pure plant nutrients through the irrigation system, supplying essential nutrients precisely to the zone of most intensive root activity. Haifa's well-balanced Nutrigation™ programs provide plants with their exact needs according to seasonal changes. Decades of experience in production and application of specialty fertilizers for Nutrigation™ have made Haifa a leading company in this field. Haifa keeps constantly up to date with contemporary scientific and agricultural research, in order to continuously broaden its product line to better meet the requirements of crops and cropping environments.

## Foliar nutrition








Foliar application of fertilizers provides fast, on-the-spot supplementary nutrition to ensure high, top quality yields and is an ideal feeding method under certain growth conditions in which absorption of nutrients from the soil is inefficient, or for use on short-term crops. Precision-timed foliar sprays are also a fast-acting and effective method for treating nutrient deficiencies. Foliar application of the correct nutrients in relatively low concentrations at critical stages in crop development contributes significantly to higher yields and improved quality. Haifa offers a selection of premium fertilizers for foliar application.






## Controlled release nutrition



A single pre-plant application of controlled release fertilizer can take care of the crop's nutritional requirements throughout the growth season. Controlled release fertilizers are designed to feed plants continuously, with maximal efficiency of nutrients uptake. Controlled release fertilizers save labor and application costs, enable application independent of the irrigation system and require no sophisticated equipment.

# Pioneering Products

Product	Nutrients				Application					Page
	N	P	K	Others						
Multi-K™ Classic	+		+		+	+				8
Multi-K™ GG	+		+		+	+			+	9
Multi-K™ Absolute	+		+		+	+			+	9
Multi-K™ pHast	+		+		+	+			+	9
Multi-K™ Reci	+		+		+				+	9
Multi-npK™	+	+	+		+	+			+	10
Multi-K™ Mg	+		+	Mg	+	+			+	10
Multi-K™ Zn	+		+	Zn	+	+			+	10
Multi-K™ S	+		+	S	+	+			+	10
Multi-K™ B	+		+	B	+	+			+	10
Multi-K™ ME	+		+	Micro	+	+			+	10
Haifa Bonus™	+	+	+			+				10
Multi-K™ Prills	+		+					+		11
Multi-npK™ Prills	+	+	+					+		11
Multi-K™ Mg Prills	+		+	Mg				+		11
Poly-Feed™ GG	+	+	+	Mg, Micro	+	+			+	12
Poly-Feed™ Drip	+	+	+	Mg, Micro	+					13
Poly-Feed™ Foliar	+	+	+	Mg, Micro		+				14
Poly-Feed™ pHast	+	+	+	Mg, Micro	+	+			+	15
Poly-Feed™ Mar	+	+	+	Mg, Micro	+	+				15
Haifa MAP™	+	+			+	+			+	16
Haifa MKP™		+	+		+	+			+	17
Haifa DKP™		+	+		+	+			+	18
Haifa P™		+			+	+			+	19
Magnisal™	+			Mg	+	+			+	20
Haifa Cal™ GG	+			Ca	+	+			+	21
Haifa Cal™ Nutrigation™	+			Ca	+					21
Haifa Cal™ Agri	+			Ca				+		21
Haifa Duo™	+		+	Ca, Micro	+	+		+		22
Haifa Micro™ Fe				Fe	+	+			+	23
Haifa Micro™ Mn				Mn	+	+			+	23
Haifa Micro™ Zn				Zn	+	+			+	23
Haifa Micro™ Cu				Cu	+	+			+	23
Haifa Micro™ Combi				Fe, Mn, Zn, Cu, Mo	+	+			+	23

Product	Nutrients				Application					Page
	N	P	K	Others						
Haifa Micro™ Soilless Combination				Fe, Mn, Zn, Cu, Mo	+				+	23
Haifa UP™	+	+			+					23
Haifa BitterMag™				Mg, S	+					24
Haifa SOP™			+	S	+	+		+		24
Haifa ProteK™		+	+		+	+			+	25
Haifa VitaPhos-K™	+	+	+		+				+	25
Multicote™	+	+	+	Mg, Micro			+			27
Multicote™ Agri (Multigro™)	+	+	+	Mg, B			+			28
CoteN™	+						+			28
Multicote™ Turf (Multigreen™)	+	+	+	Mg, Fe, Micro			+			29
MultiMix™	+	+	+	Mg, S, Micro				+		30
Hi-Green™	+	+	+	Mg				+		31
Haifa Turbo-K™	+	+	+	Mg, S, B, Fe, Zn				+		32
Haifa Ter™	+	+	+					+		33
Haifa Crop™	+	+	+	Micro				+		33



Nutrigration™



Foliar Nutrition



Controlled Release



Soil Application



Greenhouse Grade

# Potassium Nitrate Products

Potassium nitrate represents a unique source of potassium in terms of its nutritional value, efficiency and application considerations. Potassium nitrate contains 100% plant macronutrients: potassium (K) and nitrate-nitrogen ( $N-NO_3$ ). Plants absorb both the potassium and the nitrate rapidly, in a balanced manner. This improves the movement of both potassium and nitrogen in the plant; thus enhancing plant nutrition. Potassium nitrate is free of chloride, sodium and any other elements which are detrimental to plants. The nitrate enables plants to minimize their uptake of chloride, whenever this harmful anion is present in the soil solution or in the irrigation water. This makes potassium nitrate a necessity for chloride-sensitive crops.

Multi-K™, Haifa's potassium nitrate line, includes a complete range of products addressing a variety of crops, growth conditions and applications. Multi-K™ can be readily mixed with phosphate, magnesium and calcium fertilizers for enhancing a plant's nutritional value. Multi-K™ formulas enriched with phosphorus, magnesium, zinc, boron or other micronutrients offer high added value for specific growth conditions.

## Advantages of Multi-K™

- Absorbed by plants easily and completely
- Contains plant nutrients only
- Free of sodium and chloride
- Fully soluble in water
- Efficiently applied by Nutrigation™, foliar sprays or side-dressing



## Multi-K™ Classic

**N | K**

### Product analysis

N-total	13.0%
N- $NO_3$	13.0%
$K_2O$	46.0%
K	38.1%
Insoluble matter	350 ppm
Bulk density	1.0 g/cm <sup>3</sup>

### Water solubility

The solubility of Multi-K™ increases as the temperature rises. The following table shows water solubility of Multi-K™ at different temperatures.

Water temperature (°C)	0	10	20	30	40
Multi-K™ / 100 g water	13.9	21.2	31.6	45.3	61.3

### Applications

- Nutrigation™ of all crops
- Foliar nutrition\*
- Preparation of fertilizer blends
- Production of liquid fertilizers

\* It is recommended to use Haifa Bonus™ for high-K foliar sprays. (See page 10).



25kg, 500kg, 1000kg



### pH and EC

Concentration %	pH	EC mS/cm
0.05	6.5	0.68
0.1	8.7	1.30
0.15	9.1	1.96
0.2	9.3	2.60
0.3	9.6	3.80
1.0	9.9	11.4



## Multi-K™ special grades

### Multi-K™ GG N | K



Greenhouse Grade potassium nitrate

For Nutrigation™ and foliar feeding of greenhouse crops

#### Product analysis

N-total	13.5%
N-NO <sub>3</sub>	13.5%
K <sub>2</sub> O	46.2%
K	38.4%
pH (10% soln.)	9.0
Insoluble matter	350 ppm
Bulk density	1.1 g/cm <sup>3</sup>



25kg, 500kg, 1000kg



### Multi-K™ Absolute N | K



Highly-pure potassium nitrate (Technical Grade)

Suitable for Nutrigation™ and foliar feeding

#### Product analysis

N-total	13.8%
N-NO <sub>3</sub>	13.8%
K <sub>2</sub> O	46.5%
K	38.6%
pH (10% soln.)	7.0
Insoluble matter	180 ppm
Bulk density	1.1 g/cm <sup>3</sup>



25kg, 500kg, 1000kg



### Multi-K™ pHast N | K



Reduced-pH potassium nitrate

For Nutrigation™ and foliar feeding with hard water

#### Product analysis

N-total	13.5%
N-NO <sub>3</sub>	13.5%
K <sub>2</sub> O	46.2%
K	38.4%
pH (10% soln.)	4.0
Insoluble matter	350 ppm
Bulk density	1.1 g/cm <sup>3</sup>



25kg, 500kg, 1000kg



### Multi-K™ Reci N | K



Potassium nitrate for hydroponics

Potassium nitrate extra low in sodium, ideal for close (recycled) irrigation systems

#### Product analysis

N-total	13.5%
N-NO <sub>3</sub>	13.5%
K <sub>2</sub> O	46.5%
K	38.6%
Sodium (Na) Typical	150 ppm
Max.	300 ppm
pH (10% soln.)	7.0
Insoluble matter	350 ppm
Bulk density	1.1 g/cm <sup>3</sup>



25kg, 500kg, 1000kg





## Multi-K™: enriched products N | P | K | Mg | Zn | S | B | micronutrients

Multi-K™ offers a selection of enriched formulas which are ideal for application by Nutrigation™ and foliar sprays<sup>1</sup>.

Multi-npK™	13-5-42	Potassium nitrate enriched with phosphorus
	13-3-43	
	13-2-44	
Multi-K™ Mg	12-2-43+1MgO	Potassium nitrate enriched with magnesium <sup>2</sup>
	12-0-43+2MgO	
	11-0-43+4MgO	
	12-0-42+2MgO+0.1B	
Multi-K™ Zn	11-0-40+4Zn	Potassium nitrate enriched with zinc <sup>3</sup>
	12-0-43+2Zn	
Multi-K™ S	12-0-46+4SO <sub>3</sub>	Potassium nitrate enriched with sulfate
Multi-K™ B	12-0-44+1B	Potassium nitrate enriched with boron
Multi-K™ ME	12-0-43+1MgO+ME	Potassium nitrate enriched with micronutrients <sup>3</sup>
	12-0-43+2MgO+ME	
	13-0-45+ME	

<sup>1</sup> For High-K foliar nutrition use Haifa Bonus™. (see below)

<sup>2</sup> For intensive magnesium fertilization use Magnisal™. (see page 18)

<sup>3</sup> To cure and prevent severe micronutrients deficiencies use Haifa Micro™. (see page 20)



25kg, 500kg, 1000kg



## Haifa Bonus™

N | P | K



### High-K foliar formulas

Multi-K™ based Haifa Bonus™ is a foliar potassic fertilizer that enables highly concentrated sprays which reduces the number of applications needed. Haifa Bonus™ formulas contain phosphorus which enriches nutrition and lowers the pH of the solution to 4-5, thereby making it suitable for tank mixing with a large variety of pesticides. Special adjuvants in Haifa Bonus™ formulas enhance adhesion to the leaf surface, improve absorption and prolong action.

### Advantages of Haifa Bonus™

- Enables spray concentration of up to 5%
- Prolonged action
- Compatible with diverse pesticides; enabling tank mixing for spray operations savings
- Consists of pure, fully soluble nutrients only
- Free of sodium and chloride



25kg





## Multi-K™ Prills N | K

Multi-K™ Prills offer the best available product for direct soil application. Mid-season side-dressings with Multi-K™ Prills are recommended as they meet the dynamic nutritional requirements of plants and improve nutrient use efficiency.

### Product analysis

N-total	13.0%
N-NO <sub>3</sub>	13.0%
K <sub>2</sub> O	46.0%
K	38.1%
pH (10% soln.)	10.0
Bulk density	1.2 g/cm <sup>3</sup>

### Particle size distribution

Particle size		Cumulative fraction
US Mesh	mm	
+6	3.36	3%
+8	2.38	40%
+10	2.00	68%
+14	1.41	97%
+18	1.00	99.5%

### Applications

- Base- and side-dressing of all crops
- Production of granular NPK fertilizer blends



25kg, 500kg, 1000kg



## Multi-K™ Prills: enriched products N | P | K | Mg

Multi-npK™ Prills	13-3-43	Potassium nitrate enriched with phosphorus
	13-2-44	
	12-5-42	
Multi-K™ Mg Prills	12-0-44+1MgO	Potassium nitrate enriched with magnesium
	12-0-42+2MgO	
	11-0-39+4MgO	



25kg, 500kg, 1000kg



**Did you know?**  
Potassium nitrate is the ultimate K source for chloride-sensitive crops.

# Water-Soluble Fertilizers for Nutrigation™ and foliar application

Haifa's extensive selection of water-soluble fertilizers enables efficient application by Nutrigation™ and foliar sprays of an entire range of plant nutrients. All Haifa products, straight salts and NPK blends are chloride free, composed of nutrients only, and are fully consumed by the plant.

## Poly-Feed™

### Water-soluble NPK fertilizers

Poly-Feed™ offers a range of fully water-soluble NPK fertilizers designed to provide complete plant nutrition throughout the growth season. Poly-Feed™ has a wide choice of formulas and compositions that meet the needs of vegetable crops, fruits and flowers of all cropping system types.

### Advantages of Poly-Feed™ products

- Fully water soluble, safe for use with all irrigation and spraying systems
- Consist exclusively of pure plant nutrients
- Free of chloride, sodium, and other detrimental elements
- Made of high quality ingredients
- Enriched with high levels of micronutrients



## Poly-Feed™ GG (Greenhouse Grade)

N | P | K | Mg | ME

### NPK formulas for Nutrigation™ and foliar feeding of greenhouse-grown crops

- All formulas are enriched with high concentrations of micronutrients
- Suitable for use with water of varied quality
- Special formulas for soilless culture are based on ammonium nitrate and have K<sub>2</sub>O/N ratio and nitrate/ammonium ratio adapted to the conditions prevailing in soilless media
- Easily identified by the red color of both the bag and the crystals

### Formulas for soil-grown greenhouse crops

Growth stage	N:P <sub>2</sub> O <sub>5</sub> :K <sub>2</sub> O	Formula	%N-NH <sub>2</sub>	%N-NO <sub>3</sub>	%N-NH <sub>4</sub>
Root development	1-2-1	15-30-15	5.3	4.0	5.7
Vegetative	1-1-1	19-19-19	10.0	5.5	3.5
Fruit-set and fruit development	2-1-2	20-9-20	-	12.0	8.0
	2-1-3	17-10-27	-	11.5	5.5
	2-1-4	16-8-32	-	11.7	4.3

### Formulas for soilless media

Formula	K <sub>2</sub> O/N ratio	%N-NO <sub>3</sub>	%N-NH <sub>4</sub>	%SO <sub>3</sub>	EC (mS/cm)					pH
					0.5 g/l	1 g/l	1.5 g/l	2 g/l	3 g/l	
18-18-18	1.0	10	8	-	0.78	1.16	1.72	2.26	3.30	5.9
20-9-20	1.0	12	8	-	0.72	1.16	1.69	2.16	3.12	5.3
17-10-27	1.6	11.5	5.5	-	0.72	1.16	1.70	2.25	3.29	5.6
16-8-32	2.0	12	4	-	0.78	1.17	1.70	2.26	3.33	5.9
14-10-34	2.4	11	3	-	0.58	1.07	1.61	2.14	3.12	5.8
11-12-33+2MgO	3.0	9	2	3.9	0.60	1.12	1.65	2.20	3.10	5.7
11-8-34+2MgO	3.1	10	1	3.9	0.66	1.10	1.60	2.10	3.10	5.7
9-12-36+3MgO	4.0	8.3	0.7	5.8	0.60	1.10	1.60	2.10	3.05	5.3
9-10-40+2MgO	4.4	9	-	3.9	0.62	1.12	1.60	2.10	3.05	5.6

### Micronutrients included

All Poly-Feed™ GG formulas are enriched with 1000 ppm iron (Fe), 500 ppm manganese (Mn), 200 ppm boron (B), 150 ppm zinc (Zn), 110 ppm copper (Cu), 70 ppm molybdenum (Mo).



## Poly-Feed™ Drip N | P | K | Mg | ME

**NPK formulas for Nutrigration™ of fruit-trees, vegetables, and all types of crops grown in open fields**

- Enriched with magnesium and micronutrients
- Has a wide selection of formulas enabling perfect match of crop nutrition to growth requirements
- Easily identified by the light-blue color of both the bag and the crystals

### Available formulas

Growth stage	N:P <sub>2</sub> O <sub>5</sub> :K <sub>2</sub> O	Formula	%N-NH <sub>2</sub>	%N-NO <sub>3</sub>	%N-NH <sub>4</sub>	%SO <sub>3</sub>
Establishment	1-4-1	11-44-11	-	3	8	-
	1-3-1	13-36-13	-	3.7	9.3	-
	1-2-1	15-30-16	4.8	4.3	5.9	3.9
Vegetative	1-1-1	19-19-19+1MgO	9.9	5.5	3.6	1.9
	1-1-1	20-20-20	10	6	4	-
	1-1-1	18-18-18+2MgO	9	5	4	3.9
	2-1-1	26-12-12+2MgO	20	3.5	2.5	3.9
	2-1-2	21-11-21+2MgO	13	6	2	3.9
Fruit-set & fruit development	2-1-3	14-7-21+2MgO	-	6	8	25.2
	2-1-3	15-7-29+2MgO	5.1	8.5	1.4	3.9
	2-1-4	14-7-28+2MgO	-	8	6	16
	2-1-4	16-8-32+2MgO	5.5	9	1.5	3.5
	3-1-3	23-7-23+1MgO	15	6.5	1.5	1.9
	High K	12-5-40+2MgO	-	11	1	3.9

### Micronutrients included

All Poly-Feed™ Drip formulas are enriched with 500 ppm iron (Fe), 250 ppm manganese (Mn), 100 ppm boron (B), 75 ppm zinc (Zn), 55 ppm copper (Cu), 35 ppm molybdenum (Mo).





## Poly-Feed™ Foliar

N | P | K | Mg | ME

**NPK formulas for foliar feeding of open-field crops, protected crops and fruit-trees**

- Designed to nourish crops with their exact needs during critical growth phases
- Enables top quality and maximal yields
- Based on low-biuret urea
- Contains remarkably high concentrations of micronutrients in the form of EDTA chelates
- Easily identified by the green color of both the bag and the crystals

### Stage-specific formulas

	Micronutrients (ppm)					
	Fe	Mn	Zn	Cu	Mo	B
Vegetative Booster 21-21-21	1300	660	200	140	90	200
Flowering Booster 8-52-17	500	250	75	55	35	100
Fruiting Booster 16-8-34	1200	600	180	130	80	200

### Crop-specific formulas

	Micronutrients (ppm)					
	Fe	Mn	Zn	Cu	Mo	B
Poly-Wheat 23-7-23	1700	850	250	1000	110	200
Poly-Potato 12-5-40	2000	1000	300	220	140	300
Poly-Citrus 16-7-30+2MgO	1000	500	2000	110	70	300
Poly-Olive 15-7-30+2MgO	1000	500	150	110	70	4500
Poly-Rice 15-15-30	1000	1500	150	110	70	200
Poly-Vineyard 4-15-37+3MgO	2300	500	150	110	70	200
Poly-Cotton 12-5-40	2000	1000	300	220	140	300
Poly-Sugar Beet 15-7-30+2MgO	1000	500	150	110	70	4500
Poly-Cacao 15-8-33	1000	500	2000	110	70	1000



10kg, 25kg



### **Haifa tip:**

*For a prompt correction of deficiencies, apply nutrients by foliar sprays.*



## Poly-Feed™ pHast

N | P | K | Mg | Ca | S | ME

Soluble NPK fertilizers with low pH for Nutrigation™ and foliar feeding of all crops

- Designed to eliminate the need for acids in the nutrient solution
- Highly soluble in water
- Minimizes hazard of clogging and reduces maintenance of irrigation equipment
- Better nutrients uptake by the roots due to acidic root environment
- Enables lower application rates and minimizes losses of nutrients

### Available formulas

Formula	N:K <sub>2</sub> O	N-NO <sub>3</sub>	N-NH <sub>4</sub>	N-NH <sub>2</sub>	SO <sub>3</sub>	EC (0.1% soln.)	pH (0.1% soln.)
12-9-34+3MgO+ME*	1:2.8	9	1	2	3.9	1.2	3.6
12-14-28+2MgO+ME*	1:2.3	7		5	5.3	1.4	2.7
12-42-8+3MgO+ME*	1.5:1	2	6.5	3.5	3.9	1.0	3.4
15-6-25+4MgO+ME*	1:1.6	8.5	4	2.5	10.5	1.3	3.5
18-14-18+2MgO+ME*	1:1	8.8	3.5	5.7	2.8	1.2	2.7
20-10-10+4MgO+ME*	2:1	8	8	4	5.2	1.4	3.2
15-15-30	1:2	8.5	2.5	4	-	1.0	3.5
15-30-15	1:1	4.3	7.4	3.3	9.4	1.0	3.5
20-20-20	1:1	5.4	3.4	11.2	-	0.9	3.5
28-14-14	2:1	3	0.8	24.2	-	0.6	3.4
15-30-15+5CaO+ME*	1:2	11.5	-	3.5	-	1.3	3.1
19-10-15+5CaO+ME*	1:1	11	4	4	-	1.4	2.9

\* Micronutrients included: 1000 ppm iron (Fe), 500 ppm manganese (Mn), 200 ppm boron (B), 150 ppm zinc (Zn), 110 ppm copper (Cu), 70 ppm molybdenum (Mo)



25kg



## Poly-Feed™ Mar

N | P | K | Mg | ME

NPK fertilizers enriched with seaweed extracts

A variety of Poly-Feed™ formulas are available, enriched with 0.5% or 1% seaweed extracts. Seaweed extracts contain a wide range of nutrients, growth bio-stimulants and conditioners that act together to improve both plant development and soil properties.

Poly-Feed™ Mar is recommended for foliar application. It is also suitable for Nutrigation™ but this requires that the fertilizer solution be applied immediately after preparation. It is not recommended to use leftovers of the solution as this may cause damage to the irrigation system.



25kg



**Haifa MAP™****N | P****Mono-ammonium phosphate (12-61-0)**

Haifa MAP™ is a fully water-soluble fertilizer for Nutrigation™ and foliar feeding of all crops. Haifa MAP™ is recommended for use at the beginning of the growth season, when phosphorus availability is crucial for the establishment of the root system. Haifa MAP™ can be tank-mixed with other fertilizers to meet crop nutritional needs throughout the growth cycle\*. Haifa MAP™ is suitable for preparation of fertilizer blends and for production of liquid fertilizers.

**Advantages of Haifa MAP™**

- Fully water-soluble
- Consists of 100% plant nutrients
- Free of chloride, sodium and other detrimental elements for plants
- Suitable for the production of nutrient solutions
- Low pH

**Product analysis**

N-total	12%
N-NH <sub>4</sub>	12%
P <sub>2</sub> O <sub>5</sub>	61%
P	27%
Bulk density	1.1 kg/l

**Did you know?**

*An application of Haifa MAP™ at the beginning of the growth season enhances the establishment of the root system.*

**Water solubility**

Water temperature (°C)	0	10	20	30	40
g Haifa MAP™ / 100 g water	22.7	29.5	37.4	46.4	56.7

**pH and EC**

Concentration %	pH	EC mS/cm
0.1	4.7	0.86
0.2	4.6	1.66
0.3	4.6	2.5
1.0	4.4	7.4
5.0	4.2	27.8

\* Note: Haifa MAP™ should not be mixed with calcium and magnesium fertilizers.



25kg, 500kg, 1000kg







## Haifa MKP™

P | K

### Mono-potassium phosphate (0-52-34)

Haifa MKP™ is a highly efficient source of phosphorus and potassium for plants. Suitable for Nutrigation™ and foliar application, Haifa MKP™ is recommended for use at the beginning of the growing season, when phosphorus availability is crucial for the establishment of root systems. Haifa MKP™ can be tank-mixed with other fertilizers to meet crop nutritional needs throughout the growth cycle\*. Haifa MKP™ is ideal for preparation of fertilizer blends and for production of liquid fertilizers.

### Advantages of Haifa MKP™

- Fully water-soluble
- Consists of 100% plant nutrients
- Free of chloride, sodium and other detrimental elements for plants
- Suitable for the production of nutrient solutions
- Low pH
- Low salt index

### Product analysis

P <sub>2</sub> O <sub>5</sub>	52%
P	22.7%
K <sub>2</sub> O	34%
K	28.7%
Bulk density	1.2 kg/l

### Haifa tip:

*Good Nutrigation™ needs monitoring. Continuously analyze EC, pH and nutrients in the irrigation water and in soil solution.*

### Water solubility

Water temperature (°C)	0	10	20	30	40
g Haifa MKP™ / 100 g water	14.8	18.3	22.6	28.0	33.5

### pH and EC of Haifa MKP™

Concentration %	pH	EC mS/cm
0.1	4.8	0.72
0.2	4.7	1.42
0.3	4.7	2.13
1.0	4.6	6.5
5.0	4.4	25.5

\* Note: Haifa MKP™ should not be mixed with calcium or magnesium fertilizers.



25kg, 500kg, 1000kg



**Haifa DKP™****P | K****Di-potassium phosphate 0-41-54: acid-free PK source**

Haifa DKP™ combines robust P-K nutrition with an alkali reaction in the soil, thus providing an optimum solution for growers who are concerned about acidic soil conditions.

High solubility and low content of sodium and chloride make Haifa DKP™ an optimal fertilizer for Nutrigation™, mainly at the final stages of the crop growing cycle. In addition, Haifa DKP™ is an excellent foliar fertilizer.

Haifa DKP™ suits all crops, including greenhouse crops and hydroponics.

**Advantages of Haifa DKP™**

- Extra flexibility in Nutrigation™ programs
- Alkaline reaction in aqueous solution
- Ideal for correction of pH in acidic soils
- Suitable for a wide range of crops
- Highly soluble and pure, safe for use in all irrigation and spraying systems
- Can be mixed with all water-soluble fertilizers, except those containing calcium and magnesium

**Product analysis**

P <sub>2</sub> O <sub>5</sub>	41%
K <sub>2</sub> O	54%
pH (1% soln.)	8.6-9.6
Solubility	160g/100g of water at 20°C (68°F)



25kg

**Did you know?**

*Haifa DKP™ is a unique acid-free P-K source, highly recommended in acidic soils.*

**Technical-grade phosphoric acid 85% (0-61-0)**

Haifa P™ is a multi-function agent, used for plant nutrition, pH adjustment and cleansing irrigation equipment (notably dripper lines) from lime precipitates. Haifa P is an efficient source of phosphorus for plants, providing 610 grams of readily available  $P_2O_5$  per 1000g of the product. Haifa P™ is suitable for Nutrigation™ of greenhouse crops, open field crops and fruit trees.

**Advantages of Haifa P™**

- Highly-concentrated phosphoric fertilizer
- Consists of 100% plant nutrients
- Free of chloride, sodium and other detrimental elements for plants
- Free of insoluble matter
- Ideal for the production of nutrient solutions

**Product analysis**

$H_3PO_4$	85%
$P_2O_5$	61%
Heavy metals	<10ppm
Organic matter	40 ppm
Insoluble matter	<23 ppm
pH (0.1% soln.)	2.3
EC (0.1 % soln.)	2.2 mS/cm

**Did you know?**  
All Haifa's fertilizers  
are free of sodium  
and chloride.

**Physical data**

Appearance	Colorless viscous liquid
Freezing point	21°C
Density (at 25°C)	1.685 g/ml



15kg, 50kg, 100kg (PE drums)





## Magnisal™

N | Mg

### Magnesium nitrate (11-0-0+16MgO)

Magnisal™ provides plants with easily absorbed magnesium, which is absolutely essential for photosynthesis and other processes. The nitrate-nitrogen in Magnisal™ is readily consumed by plants and this improves efficiency of magnesium uptake. Magnisal™ is supplied in the form of flakes for convenient handling and is suitable for Nutrigation™ and foliar feeding of all crops.

### Advantages of Magnisal™

- Fully and highly water-soluble
- Consists of 100% plant nutrients
- Free of chloride, sodium and other detrimental elements for plants
- Contains nitrate for most efficient magnesium uptake
- Moderately acidic solution at optimal pH for foliar application

### Product analysis

N total	11.0%
N-NO <sub>3</sub>	11.0%
MgO	16.0%
Mg	9.7%
Insoluble matter	300 ppm
Bulk density	0.7 g/cm <sup>3</sup>

### Haifa tip:

*In order to prevent precipitates in the fertilizer tank, dissolve calcium and magnesium separately from phosphorus and sulfur.*

### Water solubility

- Magnisal™ is extremely soluble in water
- Solubility is about tenfold higher than that of magnesium sulfate fertilizers

Water temperature (°C)	0	10	20	30	40
g Magnisal / 100 g water	173	200	225	256	289

### pH and EC of Magnisal at various concentrations

Concentration %	pH	EC mS/cm
0.1	5.6	0.88
0.2	5.5	1.69
0.3	5.4	2.52
1.0	4.8	7.58
5.0	4.1	29.9



25kg





# Haifa Cal™ N | Ca

## Calcium nitrate

Haifa Cal™ is a highly efficient source of available calcium and nitrogen for plants. Calcium is a “quality nutrient” that enhances yield quality and prolongs shelf life of the yields. As calcium is not mobile in the plant, it has to be supplied throughout the growth season to keep adequate levels in the plant tissues and to ensure proper development. The nitrate-nitrogen in Haifa Cal™ is readily consumed by the plant and improves the efficiency of calcium uptake.

## Advantages of Haifa Cal™

- Fully water-soluble
- Consists of 100% plant nutrients
- Free of sulfate
- Free of chloride, sodium and other elements detrimental to plants
- Suitable for the production of nutrient solutions

## Greenhouse Grade

For Nutrigation™ and foliar feeding of greenhouse crops; suitable for preparation of fertilizer blends and liquid fertilizers.

## Product analysis

N Total	15.5%
N-NO <sub>3</sub>	14.4%
N-NH <sub>4</sub>	1.1%
CaO	26.5%
Ca	19.0%
Insoluble matter	300 ppm

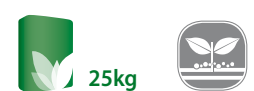


## Agri Grade

Granular fertilizer for base- and side-dressing of field crops.

## Product analysis

N Total	15.5%
N-NO <sub>3</sub>	14.4%
N-NH <sub>4</sub>	1.1%
CaO	26%
Ca	18.6%



## Nutrigation™ Grade

For Nutrigation™ of field-crops and fruit-trees; suitable for preparation of fertilizer blends and liquid fertilizers.

## Product analysis

N Total	15.5%
N-NO <sub>3</sub>	14.4%
N-NH <sub>4</sub>	1.1%
CaO	26.5%
Ca	18.9%
Insoluble matter	2000 ppm





## Haifa Duo™

N | K | Ca | ME

### Potassium and calcium nitrate

Haifa Duo™ is a range of blends of potassium nitrate and calcium nitrate granular fertilizers, based on Haifa's Multi-K™. Carefully balanced nutrition of potassium and calcium helps to improve sugars content, color, and shelf life of yield. Based on top-quality raw materials, Haifa Duo™ ready-made formulas offer extra-convenience and enhanced performance, whenever a combination of potassium and calcium nutrition is required.

Haifa Duo™ is suitable for soil application, Nutrigation™ and foliar spray.

### Advantages of Haifa Duo™

- Top quality K source, based on Haifa's Multi-K™
- Free of sodium and chloride
- A whole range of K:Ca balance to address any need
- Contains readily-available nitrate nitrogen
- Formulas enriched with micronutrients are available

### Available formulas

	N-NO <sub>3</sub>	N-NH <sub>4</sub>	K	Ca	Micronutrients
14-0-16+17CaO	13.4	0.6	13.4	12.1	
15-0-9+21CaO	14.1	0.9	7.5	15	
14-0-14+18CaO	13.3	0.7	11.6	12.9	
14-0-28+10CaO	13.6	0.4	23.2	7.1	
14-0-9+20CaO+ME	13.3	0.7	7.5	14.3	+
14-0-14+18CaO+ME	13.3	0.7	11.6	12.8	+
14-0-16+16CaO+ME	13.4	0.6	13.4	11.4	+

Micronutrients included: 1400 ppm iron (Fe)\*, 720 ppm manganese (Mn)\*, 240 ppm zinc (Zn)\*, 180 ppm copper (Cu)\*, 110 ppm molybdenum (Mo)

\* EDTA-Chelates



25kg, 1100kg



### Haifa tip:

*Thin and weak rose stems are a call for calcium fertilization.*

## Haifa Micro™ ME



### Chelated micronutrients

Haifa Micro™ offers a line of water-soluble chelated micronutrients for Nutrigation™ and foliar application of all crops. The chelated form ensures stability and plant-availability of the micronutrients, even in alkaline soils. Haifa Micro™ products dissolve rapidly and completely in water, with no risk of clogging of spray nozzles or narrow water passages.

### Available products

Haifa Micro™ Fe	Iron-EDTA 13%
	Iron-EDDHA 6%
Haifa Micro™ Mn	Manganese-EDTA 13%
Haifa Micro™ Zn	Zinc-EDTA 14%
Haifa Micro™ Cu	Copper-EDTA 14%
Haifa Micro™ Combi	7.1% Fe, 3.48% Mn, 1.02% Zn, 0.76% Cu, All as EDTA chelates 0.485% Mo as ammonium molybdate
Haifa Micro™ Soilless Combination	6.5% Fe-DTPA, 3.48 Mn-EDTA, 1.02% Zn-EDTA, 0.76% Cu-EDTA 0.485% Mo as ammonium molybdate



1kg, 25kg



## Haifa UP™

N | P

### Urea phosphate

Haifa UP™ is an urea phosphate fertilizer for Nutrigation™ of field crops and fruit trees and is suitable for preparation of fertilizer blends and for production of liquid fertilizers.

### Product analysis

N Total	17.5%
N-NH <sub>2</sub>	17.5%
P <sub>2</sub> O <sub>5</sub>	44.0%
P	19.2%
pH (10% soln.)	1.0-2.0
Insoluble matter	700 ppm
Bulk density	0.95 g/ml

Note: Haifa UP™ should not be mixed with calcium or magnesium fertilizers.



25kg



**Haifa BitterMag™****Mg | S****Magnesium sulfate**

Haifa BitterMag™ is a water-soluble, crystalline magnesium sulfate fertilizer for Nutrigation™ of all crops. Haifa BitterMag™ is suitable for preparation of fertilizer blends and for production of liquid fertilizers and is recommended where magnesium is required and nitrogen fertilization should be avoided.

**Product analysis**

MgO	16.0%
Mg	9.7%
SO <sub>3</sub>	32.0%
S	12.8%
pH (5% soln.)	6.5



25kg, 500kg, 1000kg

**Haifa SOP™****K | S****Potassium sulfate**

Haifa SOP™ potassium sulfate fertilizer is a recommended source of potassium where soil pH needs to be lowered, when sulfur is required, or when N application rates should be limited (e.g. at the end of the season). Haifa SOP™ Soluble Grade is recommended for Nutrigation™ and foliar feeding of all crops and for production of liquid fertilizers. Haifa SOP™ Agri Grade is recommended for direct soil application and for preparation of fertilizer blends.

**Product analysis**

	<b>Soluble Grade</b>	<b>Agri Grade</b>
K <sub>2</sub> O	52.0%	51.0%
K	43.1%	42.3%
SO <sub>3</sub>	45.0%	45.0%
S	18.0%	18.0%
pH (10% soln.)	2.0-4.0	-
Insoluble matter	500 ppm	-
Bulk density	1.1 g/cm <sup>3</sup>	1.1 g/cm <sup>3</sup>



25kg



**Did you know?**  
Haifa's portfolio covers the whole range of essential plant nutrients.





## Haifa ProteK™

P | K

### Systemic PK fertilizers

Haifa ProteK™ is an innovative systemic fertilizer, suitable for Nutrigation™ and for foliar application. It contains phosphorus (P) in the form of phosphite, to improve its uptake by the plant. Haifa ProteK™ enhances vegetative growth and root development, and increases fruit size and total yield. It also improves the plant resistance towards various diseases. Haifa ProteK™ is uniquely formulated as a crystalline product, for better storage and handling features as compared to liquid formulations.

Haifa ProteK™ is environmentally safe and practically non-toxic. When applied by foliar spray, Haifa ProteK™ leaves neither spots nor toxic residues.

### Available products

	Standard	Total
P <sub>2</sub> O <sub>5</sub>	26%	-
HPO <sub>3</sub> <sup>2-</sup>	30%	60%
K <sub>2</sub> O	37%	39%
K	30.7%	32.4%
pH (1% solution)	4.5-5	4-4.5
Bulk density	0.95 g/cm <sup>3</sup>	0.8 g/cm <sup>3</sup>



2kg, 10kg



## Haifa VitaPhos-K™

N | P | K

### Phosphate for soilless Nutrigation™

Haifa VitaPhos-K™ provides plant-available phosphate in the form of soluble polyphosphate, which prevents formation of insoluble precipitate. In the root zone, the polyphosphate chain undergoes slow hydrolysis, providing plant-available phosphate over time. The composition of Haifa VitaPhos-K™ ensures that the hydrolysis occurs at the right time and the right location – at the surface of the root system.

Haifa VitaPhos-K™ helps keeping water passages clean of precipitates and free for water flow. It dismantles precipitates by bonding cations, which are then released again for plant uptake.

Haifa VitaPhos-K™ is an ideal source of phosphorus for crops in soilless media. It is highly recommended in the following cases:

- In the winter, when irrigation quantities are reduced and more concentrated nutrient solutions are used
- Where the irrigation water contains high concentrations of bicarbonates
- When fast, intensive growth is expected

### Product analysis

N-NO <sub>3</sub>	4%
P <sub>2</sub> O <sub>5</sub>	31%
P	13.6%
K <sub>2</sub> O	49%



2kg



# Controlled Release Fertilizers

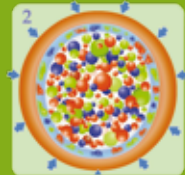
Haifa's Multicote™ range of controlled release fertilizers includes products for agriculture, horticulture, ornamentals and turf. Multicote™ products provide plants with balanced nutrition according to their needs throughout the growth cycle. Multicote™ products enhance plant development, improve nutrient use efficiency, save on labor and minimize environmental impact. Haifa produces the Multicote™ line of controlled release fertilizers by leveraging its MulticoTech polymer coating technology.

## How Multicote™ Works

**1** Multicote™ is based on polymer-coated fertilizer granules. During the production process, water-soluble nutrients are encapsulated in a polymeric shell. This shell prevents the immediate dissolution of the fertilizer when applied to the soil. The thickness of the shell determines the longevity of nutrients release.



**2** Following application, soil moisture slowly penetrates through the coating which begins a gradual dissolution of the nutrients inside the granule.



**3** The dissolved nutrients diffuse through the coating to the root zone, providing the plant with available nutrients at measured portions – according to its growth needs. The rate of diffusion – the actual release rate depends upon and is dictated solely by the soil temperature. The release rate increases as temperature rises, just as happens with plant uptake rates. Other factors, such as soil type, humidity, pH, and microbial activity do not affect the release rate.



**4** While nutrients are released to the root zone, further penetration of moisture dissolves more of the solid fertilizer. At a certain stage, the entire content of the granule is dissolved, ready for diffusion and release. From this stage the release rate slows down.



**5** After the release is complete, the empty shell ruptures and degrades, leaving no residues in the soil.



## Benefits of controlled release nutrition

- **Optimal plant development** as nutrients are precisely supplied in accordance with specific plant needs
- **Single application per season** enables drastic reduction of field labor and application costs, as well as considerably less soil compaction
- **Minimized losses** through leaching, volatilization or fixation in the soil
  - Availability of nutrients throughout the growth cycle is ensured
  - Optimized use of fertilizers without wastage, no surplus fertilization is required
  - Ecologically superior (no soil, ground-water or air pollution)
- **No salt accumulation** in the soil or growing medium
- **Fertilization totally independent of irrigation** with no need for sophisticated systems



## Multicote™ N | P | K | Mg | ME

### Controlled release fertilizers for nurseries and ornamentals

Multicote™ offers complete, carefully balanced nutrition from initial propagation through all the potting stages without allowing any disruptive shortages or oversupply situations that can affect growth and health. A single application of Multicote™ provides balanced nutrition for the plant over months. Multicote™ products feature reliable release profiles, which are unaffected by soil type, soil pH, moisture or microbial activity. Multicote™ is RHP-certified.

### Release longevity

The release longevity of Multicote™ products is determined at 21°C, and the actual release rate is governed by the soil temperature, as detailed in the table.

	Soil temperature		
	15°C (60°F)	21°C (70°F)	30°C (86°F)
Multicote™ 4	6 months	4 months	2 months
Multicote™ 6	7-8 months	6 months	3-4 months
Multicote™ 8	9-10 months	8 months	5-6 months
Multicote™ 12	15-16 months	12 months	7-8 months
Multicote™ 16	20-22 months	16-18 months	9-10 months

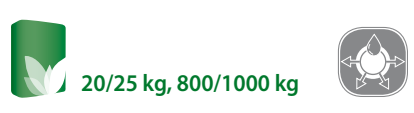
### Available formulas

Multicote™ is available as coated homogeneous NPK granules (15-7-15+ME, 14-14-14, Haifa Turbo-K™ 12-12-12+ME), coated potassium nitrate (12-0-44), coated urea (40-43% N), coated ammonium phosphate (10-48-0) and coated magnesium and micronutrients. Products can be blended to reach any desired NPK ratio. Use the FloraMatch™ software/application to select your formulas and to plan Multicote™ nutritional programs. (see page 35)

### Recommended applications

Release longevity	Recommended for
4 months	Bedding plants, pot plants and hanging baskets
6 months	Bedding plants, pot plants, garden trees and shrubs
8 months	Container grown nursery stock, garden trees and shrubs
12 months	Container grown nursery stock
16 months	Container grown nursery stock, specially recommended for use in tropical and sub-tropical regions

For initial establishment of newly-planted nursery stock, it is recommended to enrich the potting mixture with MultiMix™. (see page 30)



20/25 kg, 800/1000 kg



## Multicote™ Agri (Multigro™)

N | P | K | Mg | ME

### Controlled release nutrition for agriculture and horticulture

Multicote™ Agri controlled release fertilizers are designed to feed agricultural crops continuously throughout the growth season – for optimal growth and yield production. Based on Haifa's polymer coating technology, Multicote™ Agri release nutrients to the soil in a gradual manner, according to plant's requirements. This prevents leaching of nutrients, thus improving nutrient use efficiency and allowing for reduced application rates.

### Multicote™ Agri is highly beneficial

- On light soils, where conventional fertilizers are easily leached
- In rainy areas, when rainfall accelerates nutrient leaching
- Wherever nitrogen application is limited, e.g. by environmental regulations
- For crops with shallow root systems
- For crops with high nutritional requirements
- In cases where mid-season application is not feasible (e.g. when the crop covers the soil surface, in mulched crops and in muddy fields)

Multicote™ Agri is an ideal fertilizer for cash crops in open field, protected crops and fruit-trees.

### Multicote™ Agri products

Multicote™ Agri is available in a variety of nutritional compositions and release features. Multicote™ Agri products combine polymer-coated granules of nitrogen, phosphorus, potassium and magnesium, and non-coated, readily available nutrients. Formulas are available with release longevities of 4, 6, 8, 12 and 16 months.

Multicote™ Agri "Stages" are special formulas that provide nutrition with N-P-K ratio that adapts during the season to best match with crop's growth requirements. For example, a high proportion of nitrogen may be released during phases of vegetative growth, followed by a high proportion of potassium during productive phases.



20/25kg, 800/1000kg



## CoteN™

N

### Controlled release environmental nitrogen for arable crops (coated urea)

Releasing nitrogen continuously throughout the growth season, CoteN™ helps growers of corn, potato, wheat and other arable crops to maximize the efficiency of N fertilization. Considerably reducing losses by leaching, CoteN™ is highly recommended wherever nitrogen application is limited e.g. by environmental regulations. CoteN™ can be blended or applied in combination with other granular fertilizers in order to reach and fulfill the complete nutritional requirements of the crop.



20kg, 800kg





## Multicote™ Turf (Multigreen™)

N | P | K | Mg | ME

### Controlled release fertilizers for turf

Proper nutrition is an essential condition for healthy, vigorous, good-looking turf. Multicote™ Turf products fully address all growth factors offering optimized fertilization programs for every combination of turf species, climate conditions and maintenance level. Multicote™ Turf year-round nutritional programs are based on formulas with different N:K ratios, taking care of the changing nutritional needs of the turf plant and supporting seasonal growth processes.

Product	N:K* Ratio	Action
Booster	2:1	Dormancy breaker; Initiates intensive leaf growth.
Feeder	1:1	For balanced root and shoot growth. Helps maintaining turf quality and durability during seasons of intensive use.
Keeper	1:2 or 1:3	High-potassium fertilizer supports last leaf growth and builds carbohydrate storage. Promotes resistance against drought, frost and wear.
Multi-K™ Turf (Multiverdo™)	1:3	Quickly available potassium fertilizer; "Quick action for tough periods".

For close-cut turf, the Multicote™ Turf Mini range of fine prilled products and Hi-Green™ slow release fertilizers are recommended. (see page 31)



20/25kg, 500kg, 1000kg



### Haifa Tip:

*When using controlled release fertilizers, application rates can be reduced by 20-40%.*





## MultiMix™

N | P | K | Mg | S | ME

### All-in-one starter fertilizer for nurseries

MultiMix™ is ideal for enriching potting mixes. It contains high concentrations of all the nutrients essential for establishment and initial development of pot plants. MultiMix™ is free of chloride, sodium and other detrimental elements and is RHP certified.

### Available formulas

	12-14-24+2	14-16-18	14-5-28+2	15-10-20	0-25-36+2
Nitrogen (N) total	12%	14%	14%	15%	-
Nitrate-nitrogen (N-NO <sub>3</sub> )	7%	5.2%	8%	5.8%	-
Ammoniacal nitrogen (N-NH <sub>4</sub> )	5%	8.8%	6%	9.2%	-
Phosphorus pentoxide (P <sub>2</sub> O <sub>5</sub> ) Soluble in water and neutral ammonium citrate	14%	16%	5%	10%	25%
Phosphorus pentoxide (P <sub>2</sub> O <sub>5</sub> ) Soluble in water	13.4%	15%	4.6%	9.4%	25%
Soluble potash (K <sub>2</sub> O)	24%	18%	28%	20%	36%
Water soluble magnesium (MgO)	2%	-	2%	-	2%
Water-soluble sulfate (SO <sub>3</sub> )	11.6%	16.8%	16.9%	21.3%	28.4%
<b>Micronutrients - fully water-soluble</b>					
Copper (Cu)	0.15%	0.15%	0.15%	0.15%	0.15%
Boron (B)	0.03%	0.03%	0.03%	0.03%	0.03%
Molybdenum (Mo)	0.2%	0.2%	0.2%	0.2%	0.2%
Manganese (Mn)	0.16%	0.16%	0.16%	0.16%	0.16%
Zinc (Zn)	0.04%	0.04%	0.04%	0.04%	0.04%
Iron (Fe)	0.09%	0.09%	0.09%	0.09%	0.09%
EC @1 g/l (mS/cm)	1.5	1.5	1.5	1.5	1.2
pH @ 10 g/l	5.2	4.6	4.6	4.6	4.6



### Haifa Tip:

Use the FloraMatch™ mobile application to select your formulas and to plan Multicote™ nutritional programs for ornamental plants.



## Hi-Green™

N | P | K | Mg

### Slow release fertilizers for finely cut turf

Hi-Green™ fertilizers combine slow release urea-formaldehyde nitrogen together with readily available nutrients. Hi-Green™ is programmed to release nitrogen over 4 months with standard soil fertility, while the release rate depends on microbiological activity. Featuring extra-small particle size, Hi-Green™ fertilizers are ideal for golf-greens and close cut turf.

### Available formulas

	22-5-10+2MgO	16-26-10+3MgO	15-5-25+2MgO
Total nitrogen (N)	22.0%	16.0%	15.0%
Nitrate nitrogen (N-NO <sub>3</sub> )	1.0%	3.0%	5.7%
Ammoniacal nitrogen (N-NH <sub>4</sub> )	8.2%	8.0%	3.7%
Ureic nitrogen (N-NH <sub>2</sub> )	1.2%	-	-
Nitrogen (N) from urea formaldehyde	11.6%	5.0%	5.0%
Nitrogen (N) from urea formaldehyde only soluble in hot water	4.5%	1.9%	1.9%
Nitrogen (N) from urea formaldehyde soluble in cold water	4.6%	2.0%	2.0%
Phosphorus pentoxide (P <sub>2</sub> O <sub>5</sub> ) soluble in neutral ammonium citrate and in water	5.0%	26.0%	5.0%
Phosphorus pentoxide (P <sub>2</sub> O <sub>5</sub> ) water-soluble	4.5%	23.4%	4.5%
Potassium oxide (K <sub>2</sub> O) water-soluble	10.0%	10.0%	25.0%
Magnesium oxide (MgO) water-soluble	2.0%	3.0%	2.0%



20/25kg, 500kg, 1000kg

### Haifa tip:

*Apply Multicote™ before the rainy season to spare the need for technical irrigations.*

# Fertilizers for Soil Application with Multi-K™ inside



## Haifa Turbo-K™ N | P | K | Mg | S | Fe | Zn | B

### Complex NPK fertilizers

Haifa Turbo-K™ is a range of complex NPK granular fertilizers, based on Multi-K™ potassium nitrate. In one uniform granule, plants are provided with highly valuable nutrients combining the Multi-K™ potassium nitrate benefits plus essential macro- and micronutrients. Haifa Turbo-K™ is low in chloride, which makes it an ideal in saline soils and for chloride-intolerant crops.

All Haifa Turbo-K™ formulas are enriched with magnesium, sulfur, iron and zinc.

Haifa Turbo-K™ is recommended for open field, greenhouses and orchards.

### Advantages of Haifa Turbo-K™

- Top quality K source, based on Haifa's Multi-K™
- Contains carefully balanced K, Mg and S
- Features an optimal balance of ammonium to nitrate
- Low in sodium and chloride
- Accurate sulfur content for low environmental impact
- Homogeneous composition in each granule, ensures uniform plant nutrition

### Available formulas

	14-14-17+	15-15-15+	18-9-18+	12-10-16+
Total nitrogen (N)	14%	15%	18%	12%
Nitrate-nitrogen (N-NO <sub>3</sub> )	4.8%	5.1%	8.3%	4.5%
Ammoniacal nitrogen (N-NH <sub>4</sub> )	9.2%	9.9%	9.7%	7.5%
Phosphorus (P <sub>2</sub> O <sub>5</sub> )				
P <sub>2</sub> O <sub>5</sub> soluble in water and in ammonium citrate	14% (6.2%P)	15% (6.6% P)	9% (4% P)	10% (4.4% P)
Water-soluble P <sub>2</sub> O <sub>5</sub>	13% (5.7% P)	14% (6.2% P)	8% (3.5% P)	8.5% (3.7% P)
Potassium oxide (K <sub>2</sub> O)	17% (14.1% K)	15% (12.5% K)	18% (15% K)	16% (13.2% K)
Sulfate (SO <sub>3</sub> )	17%	20%	12%	15%
Magnesium oxide (MgO)	2%	2%	2%	3%
Boron (B)	-	-	-	0.02%
Iron (Fe)	0.1%	0.1%	0.1%	0.06%
Zinc (Zn)	0.02%	0.02%	0.02%	0.01%
Moisture	Max 0.1%	Max 0.1%	Max 0.1%	Max 0.1%
Granulometry	2-5 mm Min 90%, <1mm Max 1%			



25kg, 1100kg, bulk







## Haifa Ter™

N | P | K | Ca | Mg | S

### Granular NPK blends

Haifa Ter™ is a range of granular fertilizers for base- and side-dressing. A selection of NPK compositions, optionally enriched with magnesium, enables optimal match to crop requirements and growth conditions. Haifa Ter™ granules are uniform in shape and size, for even distribution in the field. All Haifa Ter™ products are based on Multi-K™ potassium nitrate, which ensures efficient uptake and particular suitability for saline and alkaline soils.

### Advantages of Haifa Ter™

- A selection of formulas addresses any crop's growth requirements
- Top quality K source, based on Haifa's Multi-K™ potassium nitrate
- Highly-concentrated nutrition
- Free of sodium and chloride
- Balanced ammonium/nitrate composition
- Free of sodium and chloride

### Available formulas

- 6-21-24
- 8-16-29
- 12-20-27
- 12-27-21
- 15-0-30+19SO<sub>3</sub>
- 15-23-23
- 16-8-20+2MgO
- 17-0-34+2MgO
- 18-11-23
- 19-7-12+2MgO
- 26-11-11+2MgO



25kg, 50kg, 600 kg



## Haifa Crop™

N | P | K | Mg | ME

### Granular NPK blends enriched with magnesium and micronutrients

Haifa Crop™ is a range of granular fertilizers for base- and side-dressing designed to provide nutrition at early growth stages, thus supporting healthy development and high yield. All Haifa Crop™ products are based on Multi-K™ potassium nitrate, which ensures efficient uptake and particular suitability for saline and alkaline soils. Haifa Crop™ granules are uniform in shape and size, for even distribution in the field.

### Advantages of Haifa Crop™

- Balanced formulas designed to support early growth
- Top quality K source, based on Haifa's Multi-K™ potassium nitrate
- Highly-concentrated nutrition
- Free of sodium and chloride
- Balanced ammonium/nitrate composition
- Free of sodium and chloride

### Available formulas

	Purpose
Haifa Crop™ Base 14-13-20+2MgO+ME	Pre-sowing / planting
Haifa Crop™ Top 16-7-22+2MgO+ME	Early vegetative stages growth in fruit trees
Haifa Crop™ Start 19-7-12+2MgO+ME	Early vegetative stages growth in vegetable crops
Haifa Crop™ Start+ 25-7-12+2MgO+ME	

Micronutrients included: 300 ppm manganese (Mn), 100 ppm zinc (Zn), 100 ppm boron (B)



25kg, 50kg, 600 kg



# Pioneering Knowledge

Haifa has created and developed an all-inclusive plant nutrition package born out of a deep acquaintance of over four decades with farmer's needs. It is our philosophy that sharing this knowledge helps our customers and growers to gain the full benefits of our products.

## Haifa's On-Line Knowledge Center

A comprehensive store of plant nutrition knowledge is available on our website. Well-sorted, easily accessible libraries offer crop guides, nutrition recommendations, field trial reports, research data and scientific articles. This immense database has been gathered and reviewed by Haifa's experts over decades. New materials, reporting on recent advances, are uploaded routinely. A user-friendly Lookup application will help you focus your search on particular crops and growth methods.

Check out [www.haifa-group.com/knowledge\\_center/](http://www.haifa-group.com/knowledge_center/)



## Haifa's Professional Agri Community

Our knowledge comes from growers. Every farmer or agri expert has priceless knowledge and unique tips to share. Haifa's on-line community enables its members to become part of a global knowledge sharing network, learn from agriculture experts and fellow growers, contribute their own case studies, and help the world to grow better crops.

Join-in at [www.haifa-group.com/community/](http://www.haifa-group.com/community/)



# Expert Software and Mobile Applications

## Haifa NutriNet™

### Web software for customized fertilization programs

Haifa NutriNet™ is a powerful tool designed to help growers plan irrigation schemes and Nutrigation™ (fertigation) programs that take actual growth conditions into consideration. Haifa NutriNet™ leverages a comprehensive database of crop nutrition, irrigation, soils and climates that meet almost any growth environment. The user retrieves or enters information via a sequence of stages, which is integrated via the software to a detailed, optimized Nutrigation program. Haifa NutriNet™ supports most common units of mass and area. Haifa NutriNet™ software is available in English and Spanish interfaces are available and is operated over the web exclusively ([www.haifa-nutrinet.com](http://www.haifa-nutrinet.com)).



## FertiMatch™

### Mobile applications for Nutrigation™ calculations

FertiMatch™ is a mobile application designed to assist growers in Nutrigation™ calculations. In three simple steps, FertiMatch™ calculates the quantities of fertilizers required in the tank in order to reach a desired nutritional composition in the irrigation line.

Operated on mobile devices with no need for web access, it can be used by anyone who needs it directly, anytime, anywhere. It is easy to operate, which makes it a handy tool in any farmer's daily work.



## FoliMatch™

### Mobile application for foliar sprays advice

FoliMatch™ application is the farmer's assistant for foliar spraying. It assesses the suitability of actual weather conditions for spray operations, taking into plant parameters. The application then calculates the amount of fertilizer in the sprayer tank depending on crop type, fertilizer in use, application method, sprayed area, and tank volume.



## FloraMatch™

### Web software and mobile application for nutrition of ornamental plants

FloraMatch™ is an innovative software program, specially developed to integrate Multicote™ products into fertilization programs for ornamental plants and is easily operated over the web, or as a mobile application. FloraMatch™ offers the following benefits:

- Helps select ingredients to meet any desirable ratio of nutritional elements & longevity
- Shows release curves of main Multicote™ ready-made and customized formulas
- Predicts nutrient availability according to expected temperatures
- Includes comprehensive database of nutritional requirements of ornamental plants



Scan to learn more and to download the applications



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