



Crop Nutrition

Under our Manuchar Agro brand we focus on the global commercialization of high-quality water-soluble fertilizers, delivering products to over 30 countries in the world.

Manuchar offers a full portfolio of solid water-soluble crop nutrients used for greenhouses, drip irrigation fed crops, foliar fertilizers, and for the production of liquid fertilizers.

Fertilizers provide nutrients that optimize a plant's growth and development, increasing the yields of the crops. We are specialized in the horti- and floriculture industry, helping farmers grow higher value crops like roses and other flowers, all types of berries, tomatoes, peppers and lettuce amongst others, but also service a number of open field crops like pineapples, bananas, grapes, avocados that are fed through fertigation or foliar application.

In various countries we also produce added value NPK blends specifically tailor-made for local open field applications (coffee, bananas, mango, rice, sugar cane...) and offer logistics services to the commodity fertilizer industry.

Crop Nutrition team

As part of the Manuchar group, our local Crop Nutrition teams are present in many parts of the world. They have the ability and the resources to present tailor-made crop nutrition solutions with personalized offers and deliver your products of the highest quality through various logistic modalities.



Manuchar as a global player

In 2023 we handled 4 million metric tons of goods, generating 2.4 billion USD in sales. Our local operations are in over 40 countries and 160 locations. Manuchar employs 2,800 professionals worldwide.

At Manuchar “We keep your production running. Anytime. Anywhere.”



Crop Nutrition Portfolio

Please find below a selection of products we offer. This list is non-exhaustive. If the product you are looking for is not included, please contact us.

1. Straight water-soluble crop nutrients

M NITRATES

CALCIUM

Appearance	White granule
Total Nitrogen (N)	15,5% min
Nitrate Nitrogen	14,4% min
Ammoniacal Nitrogen	1,1% min
Calcium Oxide (CaO)	26% min
Calcium (Ca)	18,8% min
pH value	5-7
Water-insolubles	0,1% max
Granulometry	2-4mm 90%, 1-2mm 10%



MAGNESIUM

Appearance	White crystalline
Total Nitrogen (N)	10,7% min
Magnesium Oxide (MgO)	15% min
Magnesium (Mg)	9,2% min
pH value	> 4 (typical 6)
Water-insolubles	0,05% max
Granulometry	2-4mm 90%, 1-2mm 10%



POTASSIUM

Appearance	White powder
Total Nitrogen (N)	13,5% min
Nitrate Nitrogen	13% min
Ammoniacal Nitrogen	0,5% min
Potassium (K2O)	45% min
Perchlorate	-
pH value	6-7,5
Water-insolubles	0,2% max



M PHOSPHATES

MAP

Appearance	White crystalline
Nitrogen (N)	12% min
Phosphorous (P2O5)	61% min
pH value	4-5
Water-insolubles	0,1% max



MKP

Appearance	White crystalline
Phosphorous (P2O5)	52% min
Potassium (K2O)	34% min
pH value	4,3-4,7
Water-insolubles	0,1% max



UP

Appearance	White crystalline
Nitrogen (N)	17% min
Phosphorous (P2O5)	44% min
pH value	1,6-2,4
Water-insolubles	0,1% max



M SOLUBLES

AMMONIUM SULPHATE

Appearance	White or off-white crystalline
Nitrogen (N)	21% min
Sulphur (S)	24% min
Free Acid	0,08% max
Granulometry	0,1-2mm



MAGNESIUM SULPHATE

Appearance	White crystalline
Purity	99% (typical 99,8%)
Magnesium Oxide (MgO)	16,3% min
Magnesium (Mg)	9,8% min
Sulphur (S)	13% min
pH value	6-8
Water-insolubles	0,01% max



POTASSIUM SULPHATE

Appearance	White powder
Potassium (K2O)	50% min / 52% min
Sulphur (S)	17-18% min
pH value	2-3
Water-insolubles	0,01% max



POTASSIUM CHLORIDE

Appearance	White crystalline
Potassium (K2O)	60% min / 62% min
Water-insolubles	0,03% max



MANGANESE SULPHATE

Appearance	Off-white to light pink powder
Manganese (Mn)	31,8% min
Sulphur (S)	17% min
pH	5-7



ZINC SULPHATE

Appearance	White crystalline
Zinc (Zn)	21,5% min
Sulphur (S)	11% min



IRON SULPHATE

Appearance	White crystalline
Iron (Fe)	20% min
Sulphur (S)	11% min



2. Specialty crop nutrients

M SOLUMAX

Tailor-made high-quality water soluble NPK formulas with chelated trace elements.

Examples:

- 18-18-18 +TE
- 15-5-30 +TE
- 13-40-13 +TE
- 7-12-40 +TE
- Other formulas on demand



M MICROPLUS

FERRO (DTPA Fe 11%)

Iron Chelated	11% min
pH	2-4



FERROMAX (EDDHA Fe 6%)

Iron Chelated	5.8 -6.5%
pH	7-9
Ortho-Ortho value	4.8



MANUCOP (EDTA Cu 14%)

Copper Chelated	14.5-15.5%
pH	6-7



MANUFER (EDTA Fe 13%)

Iron Chelated	12.5-13.5%
pH	3.8-6



MANUMAN (EDTA Mn 12%)

Manganese Chelated	12.5-13.5%
pH	6-7



MANUZIN (EDTA Zn 14%)

Zinc Chelated	14.5-15.5%
pH	6-7



M MANUBOR

MANUBOR POWDER

Appearance	Fine powder
Boric acid (H3BO3)	99,9% min
Boron trioxide (B2O3)	56,24 % min
Granulometry	Mesh 120-200: 90%



MANUBOR GRANULAR

Appearance	Small granule
Boric acid (H3BO3)	99,9% min
Boron trioxide (B2O3)	56,24 % min
Granulometry	Mesh 20: 98% pass



MANUBOR SOLUBLE 21

Sodium Octaborate Tetrahydrate	99.2-101%
Boron Oxide (B2O3)	66.97-68.18%
Boron (B)	20.8-21.17
Sodium Oxide (Na2O)	14.9-15.17
pH at 20°C	6.85-7.85
Solubility in water 20°C	220 g/L



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