

Hakaphos® Violetta
13-40-13 (+T.E.)

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Water soluble NPK compound fertilizer with magnesium, sulphur and micronutrients. Free of sodium and urea, low in chloride (Cl < 1 %).

For application in dissolved form via fertigation.

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Marketed by:
COMPO GmbH & Co. KG
Gildenstraße 38
48157 Münster
Germany

Technical data:

Macronutrients:

13 % nitrogen (N)
4.3 % NO₃ nitrogen
8.7 % NH₄ nitrogen

40 % phosphate (P₂O₅),
water soluble

13 % potassium oxide (K₂O),
water soluble

0.1 % magnesium (MgO)

0.4 % sulphur (S)

Micronutrients:

0.011 % boron (B)
0.019 % copper (Cu)
0.050 % iron (Fe)
0.050 % manganese (Mn)
0.001 % molybdenum (Mo)
0.019 % zinc (Zn)

Physical properties:

Crystalline salt

Colour:

Violet

Particle size:

0.1 - 1.0 mm (> 90 %)

Bulk density:

1003 g/l

Storage:

Hakaphos® Violetta 13-40-13
can be stored in the unopened
original container for several
years.

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Opened containers should be used up or be resealed immediately; the product is hygroscopic.

Any hardening of Hakaphos® Violetta 13-40-13 that may occur during prolonged storage does not influence the chemical quality and solubility of the product.

Recommendations for application:

Hakaphos® Violetta 13-40-13 contains all necessary plant nutrients for a complete fertilization of agricultural and horticultural crops. Its excellent solubility prevents clogging of drip emitters and sprayer nozzles. As, however, certain types of water may lead to precipitation even without the addition of fertilizer, special care is required where such waters are used with Hakaphos® Violetta 13-40-13.

Liquid Fertilization:

400 l water/100 m ² (=4 mm)	Fertilizer concentration [%]	Hakaphos® Violetta [g/100 l water]	Number of fertilizer applications/week
vegetables			
nursery	0.1 - 0.3	100 - 300	1 - 2
transplanted	0.2 - 0.4	200 - 400	1 - 2
cutflowers			
	0.2 - 0.3	200 - 300	1 - 2
potted plants			
nursery	0.05 - 0.3	50 - 300	1 - 2
main development	0.1 - 0.4	100 - 400	1 - 4

If leaves are wetted by the concentrated Hakaphos® Violetta 13-40-13 solution used for liquid fertilization, it is recommended to rinse the plants with clear water.

Drip irrigation:

Fertilizer rate and timing depend significantly on the fertigation technique used so that no valid general recommendations can be given.

For fruits and vegetables the following maximum amounts should not be exceeded with continuous drip irrigation.

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Sensitivity of crops	Max. amount of Hakaphos® Violetta in g/l water*	Crops
high	1.3	deciduous fruits, citrus, strawberry, peppers, lettuce, carrots, beans
medium spinach	2.5	tomato, melon, other cucurbits,
low	5.0	beetroots, asparagus

*When the electric conductivity (e.c.) of the irrigation water is close to 0. The maximum amount of Hakaphos® Violetta which may be applied is reduced in the case of irrigation water of high e.c.

Hakaphos® Violetta 13-40-13 is miscible with virtually all the common plant protection agents; it is not miscible with strongly alkaline products or with mineral oils. A simple compatibility test with the intended mixing partners is recommended before practical use.

Generally: frequent applications at low rates yield the best results.

Notice to buyer:

Careful tests have proven that the product is suitable for the recommended purposes when used in accordance with our instructions. However, since storage and use are beyond our control and we are unable to foresee all circumstances arising therefrom, we are only liable for a consistent quality of the product, but the risk of its storage and use is not borne by us.