

Rexolin[®] APN

Rexolin[®] APN is a combination of the chelated micronutrients Fe, Mn, Cu, Zn, Co and B, Mo in one single microgranule and is developed for the correction and prevention of general micronutrient deficiencies in a wide range of agricultural and horticultural crops.

Rexolin[®] APN is developed for usage in hydroponic systems and for soil applications, but can also be used as foliar fertilizer.

Rexolin[®] APN contains 60 grams iron per kg of product as Fe-DTPA derived from diethylene-triaminepentaacetic acid. Other metals apart from boron and molybdenum are chelated by EDTA, ethylenediaminetetraacetic acid.

Rexolin[®] combi products contain a range of chelated micronutrient formulations with their own specific metal contents and ratios. For other applications and products please ask for our other Akzo Nobel Micronutrients products.

Why micronutrients are combined

In general the availability of micronutrients in alkaline and calcareous soils decreases. The higher the organic matter content, the more micronutrients are fixed and fewer nutrients are available for the crop. The exception is molybdenum that becomes better available when pH and organic matter content rise. Also low in micronutrient levels are highly leached sand soils and soils derived from poor parent rock material. Therefore the appropriate amounts and proper ratio of micronutrients have to be applied.

Deficiencies clearly caused by a single element should be cured by applying this lacking element. Soil or substrate analyses or leaf tissue analyses do help in obtaining information about the nutritional conditions of the crop. Due to interactions of the nutrients in the plant a certain visual deficiency symptom can not always be assigned to just one missing nutrient.

In hydroponic systems and when mixed in NPK fertilizers **Rexolin[®] APN** prevents interactions of the micronutrients because nutrients are fully chelated.

Directions for Use

Rexolin[®] APN is meant for application to plants, after diluting with water.

Rexolin[®] APN is photodegradable: it has to be mixed with the soil during or immediately after application. Keep prepared stock solutions in the dark.

Application of the Product

The product can be applied in hydroponic systems, to the soil, and as foliar fertilizer.

A. Hydroponics

The ratio between the micronutrients in **Rexolin[®] APN** reflects the average plant need.

The preferred pH near plant roots in soilless cultures for most plants is 5.5. However, in practice it may rise to as much as 7.5. That is why DTPA iron rather than EDTA iron is generally preferred. Vegetable crops (tomato, cucumber, etc.) do need 15 µmol/l Fe in the form of Fe-DTPA continuously, flower crops (roses, gerbera, carnation, etc.) 25-35 µmol/l Fe. Consult table A for equivalents in grams of product.

Never bring **Rexolin[®] APN** in direct contact with concentrated acids. **Rexolin[®] APN** is stable between pH 3 and 7. Chelation of all the metals in **Rexolin[®] APN** prevents competition at the complex. Use the stock solution within one or two weeks. Check the Fe-level after recirculation or disinfection and add extra **Dissolvine[®] D-Fe-6** if necessary.

For more information please ask for our leaflet "Chelation of micronutrients in soilless culture".

B. Soil Application

Best results in soil application are obtained when soil pH is below 7.0. Apply it dissolved in water to the soil close to the plants or trunks. After each application water carefully to enhance nutrient uptake. Application must be made in a way that ensures the solution to reach the roots.

C. Foliar Application

Foliar feeding provides a rapid response and is recommended when fast correction is necessary or soil application is expensive and impractical, or impossible, for example if the soil is extremely wet. Repeated applications are usually necessary. For improving leaf

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coverage it is advisable to add a wetting agent, efficacy may be further increased by adding urea. Dissolve the product to a suitable concentration, and apply with spraying equipment. The pH of final concentration should be lower than 7, the final EC lower than 1. Dose rates for a specific crop should be tested first on a small scale.

Preventive treatment is made at the beginning of the growing season, when leaves are emerging. Curative treatment should be made upon early signs of chlorosis. Repeat treatments 2-4 times with 2 weeks interval. To reduce the risk of leaf and fruit scorching avoid application during hot, sunny days. Do not apply when crop is in bloom.

Compatibility

The product can be mixed with most other fertilizers and agrochemical products without inactivation, precipitation or scorching problems. Do not mix with chemicals based on metal compounds. In liquid fertilizers it is though recommended to use the mixture without delay if not ion exchange occurs causing a reduced effect of the nutrients.

Mixing

Add the required amount of product to a half filled sprayer tank, then complete the filling process. Ensure that sprayer nozzles are adequate for 200-1000 liters water/ha. Use the higher volume under dry conditions, when treating larger crops and at dense foliage.

Precautions

- ✓ Store in original box, keep tightly closed and store in cool dry place
- ✓ Store away from children, pets, livestock and foodstuff
- ✓ Wear gloves and wash hands after application and before meals

No health hazards are involved in normal handling of **Rexolin® APN** but it is advisable to follow the above precautions.

Packing & Storage

The product is packed 25 kg net in cardboard boxes with an inside polyethylene bag. Shelf life of the product is greater than 3 years.

When the humidity barrier of the package has been broken, seal the package as well as possible after usage. Atmospheric humidity may cause lumps. Ultra violet light causes deterioration but is believed to be of low significance for the shelf life of the product. Store the product in its original package.

Dose Rates

The degree of deficiency is governed by crop, variety, soil conditions and plant status.

The following dosages can be used as guidance. Always adapt to the crop and cultivar involved and to the local circumstances.

A. Glass house Crops:

<u>Crop</u>	<u>Deficient soil / compost</u>	<u>Soiless culture*</u>	<u>Foliar application</u>
	For every watering		2 weeks interval
Vegetables	30-55 g/1000 l	14 g/1000 l	0.2-1 g/l
Cut flowers	30-80 g/1000 l	23-32 g/1000 l	0.2-1 g/l
Potted flowers pot plants		14 g/1000 l	0.2-0.8 g/l

*) For the dose rate of a 1m³ tank, 100 times concentrated: multiply the amount of grams mentioned with 100

B. Arable Crops and Open Field Horticultural Crops:

<u>Soil application, arable crops</u>	5 kg/ha	Apply pre-drilling or pre-planting to bare soil in a convenient volume of water, cultivate after spraying.
<u>Soil application, horticultural crops</u>	5-10 kg/ha	Apply through the watering system. Use enough water to wet the top 10 cm of the soil.
Vegetables	3-6 kg/ha	Use clean water immediately afterwards to wash the foliage.
Fruit crops	5-15 kg/ha	Or use the last 5 minutes the foliar application rate.
<u>Foliar application</u>	1-1.5 kg/ha	Apply in a water volume that gives adequate coverage of the crop (200-1000 L). Do not exceed a concentration of 0.1%. Use 1-1.5 kg/ha per application, but lower amounts for fruits with soft peel.
Soy-bean	1 appl.	
Citrus, Apple	2-4 appl.	
Grapes	2-3 appl.	
Peach, Plum	2-3 appl.	
	0.5-1 kg/ha	

1 kg/ha = 0.9 lbs/acre

1 g/l = 0.13 oz/gal

Main characteristics

- EC (1 g/l): 0.24 mS/cm
- Chloride free