

CHELAL[®] Fe

EC FERTILISER: Iron chelate (chelating agents DTPA, EDTA, HEEDTA)

Declared content:

Micro-nutrient expressed as percentage by weight:

Water-soluble iron (Fe): 5.2 % (= 65 g Fe/L)

Total iron (Fe) chelated by authorised chelating agents: 5.2 % (= 65 g Fe/L)

Iron (Fe) chelated by DTPA: 3 %

Iron (Fe) chelated by EDTA: 1.2 %

Iron (Fe) chelated by HEEDTA: 1 %

pH range guaranteeing acceptable stability of the chelated fraction: between pH=4 and pH=10

Product low in chloride.

To be used only where there is a recognised need. Do not exceed the appropriate dose rates.

Recommendations

Do not exceed the maximum concentration of 0.3 % (= 0.3 L CHELAL[®] Fe in 100 L water). Maximum concentration in greenhouse: 0.2 % (= 200 cc in 100 L water).
Treat preferably during early morning or late evening.

Applications

Consult our crop-related programs.

Role of iron

During growth, all plants have a major, imperative and continuous demand for iron and it is essential that the absorbed iron is well transferred from older leaves towards young shoots.

Iron is part of numerous enzymatic systems (peroxydase, catalase, cytochrome, ferredoxine) and has a catalytic action on protoporphyrine (= precursor of chlorophyll) building.

Iron stabilizes proteins, assists at the synthesis of highly energetic components and stimulates, through its role in respiration and energy production, the active intake of other elements. Fe is also a cofactor of nitrite reductase, which reduces nitrites into ammonia.

Relative susceptibility to iron – deficiency

Very susceptible

cabbage
cotton
fruit-trees (apple, plum, pear, cherry, peach, apricot,...)
kiwi
lettuce
nut
peanut
soybean
spinach
tomato
winegrape

Moderately susceptible

barley
citrus
corn
durum wheat
endive
oats
rice

Less susceptible

potato
rye
sugar beet

Symptoms of iron-deficiency

Symptoms of iron-deficiency are mostly noted on young leaves and shoot tips. Chlorosis then expands and turns into necrosis of the youngest leaves, chlorosis of the older ones and necrosis of the youngest twigs. Typically, chlorosis is not always uniformly present in the field. Even on the same tree, branches with and without chlorosis can be present.

Iron chlorosis is especially induced by:

- soils with pH > 7
- acid and rather leached soils
- badly drained soils (residual water)
- badly aerated soils (CO₂-accumulation and lack of oxygen)
- excessive use of P₂O₅ (fruit-trees and ornamentals)
- excessive use of nitrogen (esp. nitrate) on soils with high pH
- high bicarbonate - levels of irrigation water used
- extreme temperatures
- excess level of heavy metals (Cu, Zn, Mn)
- excessive use of base forming fertilizers (calcium Cyanamid - liquid ammonia)
- soils that have too high/low organic matter levels
- Mn-antagonism
- virus attacks or other diseases (side effects)
- lack of potassium

Characteristics

CHELAL[®] Fe contains iron which is completely chelated, forming a systemic chelate that is perfectly absorbed by the leaf and root. CHELAL[®] Fe is extremely suited to prevent iron chlorosis in horticultural crops, flowers and fruit-trees. CHELAL[®] Fe remains stable in the soil or standard nutrient solution until pH 7.2 – 7.8.

Precautions

- wash hands thoroughly after handling; do not drink, eat or smoke during handling.
- if swallowed, seek medical assistance.
- in case of contact with eyes, rinse with plenty of clean water.
- store in a cool, dry place, out of reach of children and animals and far away from food products. Always keep the product in its original container.
- store the product at a temperature between 40°F and 90°F (= 5°C - 30°C).

Miscibility

CHELAL[®] Fe is miscible with most pesticides and herbicides. Avoid mixing with oil-based products. It is advisable to conduct a miscibility test before application. In case of doubt, consult our technical service.

Preparation of the solution

Sometimes a light sediment can appear on the bottom of the can. This sediment is soluble in water. Shake well before use. Pour CHELAL[®] Fe into the sprayer tank while filling with water. Continue stirring until the solution is applied.

Warranty

The liability of the manufacturer is limited to delivery of the product in its original container in conformity with the guaranteed analysis, as indicated on this label. The manufacturer is not responsible for inappropriate or inaccurate use of the product nor for damage caused by weather conditions, soil characteristics or special sensitivity of crops and varieties. In no case shall BMS Micro-Nutrients be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the buyer. BMS Micro-Nutrients makes no warranties of merchantability of fitness for a particular purpose nor any other express or implied warranty except as stated above.

Contact

BMS Micro-Nutrients N.V.
Rijksweg 32 - 2880 Bornem - Belgium
Tel.: + (32)(0)3/899.10.10
Fax: + (32)(0)3/899.40.45
E-mail: info@chelal.com

Autorized in organic production in accordance with EC-regulations 834/2007 and 889/2008

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	Substrates: dose for 100.000L of nutrient solution	Soil applications: dose for 100 m ² (to be divided over the whole season)
<u>Horticulture</u>		
Strawberry	1,4 - 1,8 L	250 ml
Egg-plant	1,4 - 2,8 L	350 ml
Pumpkin	1,5 - 2,0 L	250 ml
Lettuce	3,7 L	500 ml
Melon	1,5 - 2,0 L	250 ml
Cucumber	1,4 - 3,2 L	300 ml
Pepper	1,4 - 2,8 L	300 ml
Watermelon	1,5 - 2,0 L	250 ml
Tomato	1,4 - 3,2 L	300 ml
<u>Ornamentals</u>		
Anthurium	1,4 L	250 ml
Carnation	2,3 L	300 ml
Chrysantemum	3,2 - 5,6 L	500 ml
Cymbidium	0,6 L	80 ml
Gerbera	3,2 L	400 ml
Pot plants	1,4 L	
Poinsettia	1,8 L	250 ml
Rose	2,3 L	300 ml

Inert substrates: Rockwool, peat, argex, NFT,....

The nutrient solution containing the indicated dose of CHELAL[®] Fe has to be distributed continuously during the whole season