



New lawns



Flower meadows



Greenhouse soils



Vegetable cultures



Tree nursery



Flowers and herbaceous perennials

LIQUMUS®; Registered trademark of Humintech



REGISTERED AT:  
**B B A**  
Federal Biological  
Research Center for  
Agriculture and Forestry



**Bio-catalyzing  
Bio-stimulation for  
plant and root  
Increases the brix level  
Chelates essential  
microelements  
Increases the permeability of  
plant membranes  
Increases fertilizer efficiency**

# LIQUMUS<sup>®</sup>

## HUMUS<sup>®</sup>

**18% Humic Acids Concentrate  
in the potassium humate form**



derived from Leonardite

**LIQUMUS® 18** is a potassium humate suspension with 18% bio-active humic acids. It is a water soluble high quality plant growth stimulant and soil conditioner especially for sandy and clay soils. It can be applied for agricultural and horticultural plants, fruit trees, flowering plants, turf and pasture for soil and foliar application. It is a permanent humic substance and can not be degraded that fast by the micro-organisms of the soil. It can be used together with or without most fertilizers and micronutrients. It can enhance the performance of fertilizers and reduces input-costs.

### COMPOSITION:

Humic Acids (Humic & Fulvic Acid):	>18% w/w
Organic Matter:	16.5%
Potassium (K <sub>2</sub> O):	3%
Iron (Fe):	0.3%
pH-value:	9-10.5
Density:	1.12 kg/L
Particle size of insol. Cont.:	<100 microns
Solubility in water:	100%
Color:	dark brown
App. 60 physiologically active trace elements for plants	

### BENEFITS:

- Stimulates plant growth by an increased biomass production
- Increases yield and improves quality of plants
- Stimulates plant enzymes
- Improves the soil structure and the water-holding capacity
- Increases and stimulates beneficial micro-organisms
- Enhances the cation exchange capacity (CEC)
- Increases the effectiveness of fertilizers and reduces nutrient especially nitrate leaching Promotes root development
- Increases the permeability of cell-membranes in the roots and increases nutrient uptake
- Acts as a natural chelator for micro-elements in alkaline soils and increases their availability for plants
- Decreases stress by drought and stress by the application of plant treatments Increases the germination of seeds and enhances development of radicles
- Reduces the residues of herbicides and toxic substances in soils
- Delays the decomposition of ultraviolet unstable agents

### NOT A PLANT FOOD INGREDIENT

**PRODUCT CAUTION:**  
**KEEP OUT OF REACH OF CHILDREN.**  
**HARMFUL IF SWALLOWED. AVOID CONTACT WITH SKIN, EYES OR CLOTHING.**

In case of contact immediately flush skin, eyes or clothing with plenty of water.

### Manufactured by:



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### DIRECTIONS FOR USE:

**LIQUMUS<sup>®</sup> 18** is a concentrated, soluble liquid suspension and will not block the nozzles of irrigation systems, as the particle size of the suspension is <100 microns (approx. 155 mesh). It is suitable for direct application or you also can mix it with soluble fertilizer formulations like soluble NPK, DAP or urea and also with herbicides, pesticides, fungicides and defoliant. It can be applied by sprinkler, drip or surface irrigation systems. We recommend a miscibility test before the first application of a mixture.

### Soil application (Trickle/ Drip Irrigation):

Apply 10-20 L (2.5-5 US-gal.) per hectare (2.5 acre) per year, on soils poor in organics and/or on sandy soils 15-30 L (4-8 US-gal.) per hectare (2.5 acre) per year. It is recommended to use it more frequently but in rather small application-rates.

### Foliar application (Boomspray/ Sprinkler/ Overhead Irrigation):

Mix 3-5 L (0.8-1.3 US-gal.) with at least 200 L (50 US-gal.) water per hectare (2.5 acre) and apply the mixture 2-4 times per crop, and add to foliar fertilizers or to pesticides.

### Hydroponic:

For hydroponics, use 5 ml per L of nutrient solution (4 tsp/US-gal.). When changing nutrient, add 3 ml to 5 ml per litre of nutrient solution. Use throughout the entire growth cycle to promote improved nutrient uptake.

### Potting Soil:

Mix 5 ml per litre (4 tsp/US-gal.) to water. Apply to pots three times (soil drench) during each phase of growth.

**SHAKE WELL BEFORE USING!**

### Seed Soak:

Blend the seeds with a 0.01-0.03 % solution, pH 7-7.5, the best at 20°C for 8-10 hours. Per 100 kg (220 lbs) seeds apply 75-100 ml (15-20 tsp) of **LIQUMUS<sup>®</sup> 18**.

### Transplanting or Cutting:

Mix 2 L (0.5 US-gal.) **LIQUMUS<sup>®</sup> 18** per 80 L (20 US-gal.) of solution.

### UV protection:

Mixture of 0.5% (2 L (0.5 US-gal.) in 400 L (100 US-gal.) water/ha (2.5 acre) and 1 m crown height).

### GENERAL RECOMMENDATIONS FOR USE:

**LIQUMUS<sup>®</sup> 18** disperses well in water with a minimum of agitation.

1. Partially fill tank with water and start agitation.
2. Add **LIQUMUS<sup>®</sup> 18** slowly to the circulating mix.
3. Fill tank and agitate thoroughly.

Fertilizers or nutrients with an extremely low pH (< pH 4) or extrem hard water can cause the humic fraction to precipitate. If precipitation occurs agitate the mix during application to obtain an even distribution of the products.

Always check compatibility with other products and dilute **LIQUMUS<sup>®</sup> 18** with water prior to use!



**Net contents 1 L (0.26 US-gal.)**