

## DESCRIPTION:

**LIQHUMUS 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 and can be applied for agricultural and horticultural plants, fruit trees, ornamental 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.

### ORIGIN:

**LIQHUMUS 18®** is gained through alkaline extraction from German highly oxidized lignites (known as Leonardite). It arises at the chemical and biological humification of plant and animal matter and by the biological activity of microorganisms. They provide a very high content of humic and fulvic acids and about 60 natural biologically active trace elements.

### COMPOSITION:

Potassium Humates:	>18%
Potassium (K <sub>2</sub> O):	2.5%
Iron (Fe):	0.2%
pH-value:	9-10.5
Density:	1.12 kg/L
CEC:	400-600 meq/100g
Particle size of insol. Cont.:	<100 microns
Solubility in water:	100%
Color:	dark brown
App. 60 physiologically active trace elements for plants	



**OMRI™**  
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Organic Materials Review Institute

REGISTERED AT:  
**BBA** - Federal Biological  
Research Center for  
Agriculture and Forestry

# Potassium Humate Suspension

# LIQHUMUS®

## 18% Liquid Potassium Salts of Humic Acids for soil and foliar application

### BENEFITS:

**LIQHUMUS 18®** is a bio-active growth-stimulant and soil conditioner with 18% humic acids, especially for sandy and clay soils. It can be applied to all agricultural and horticultural plants. It can enhance the performance of fertilizers and reduces input-costs.

- 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

### DIRECTIONS FOR USE:

**LIQHUMUS 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. 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. 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 per hectare per year, on soils poor in organics and/or on sandy soils 15-30 L per hectare per year. It is recommended to use it more frequently but in rather small application rates.

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

Mix 0.75 L with at least 1000 L water per hectare and apply the mixture 2-4 times per crop, and add to foliar fertilizers or to pesticides.

### Seed treatment

Blend the seeds with a 0.05-0.15% solution, pH 7-7.5, the best at 20°C for 8-10 hours. Per 100 kg seeds apply 50-100 ml of **LIQHUMUS 18®**.

### UV protection:

Mixture of 0.5% (2L in 400L water/ha and 1m crown height).

### Form of delivery

20L PE Canister  
1000L IBC Cont.  
Other forms of delivery are available on request.

**For further information, please contact:**  
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**HUMINTECH®**  
HUMIC ACIDS BASED PRODUCTS