



# SICO-UP 17-44-0 UREA PHOSPHATE technical

Superior water soluble free flowing acidic crystalline NP

horticultural fertiliser

IMO 8 – UNO 1759

latest version – dated 7/2014

## 1. PRODUCT DESCRIPTION

Chemical Formula H<sub>3</sub>PO<sub>4</sub>.Co(NH<sub>2</sub>)<sub>2</sub>  
 HS Code 28352990  
 CAS number 4401-74-5

### Properties:

White crystalline, freely soluble in water with its water solution being acidic (pH of 1% water solution being 1.73), not soluble in ether, toluene and carbon tetrachloride.

**A superior quality grade with extra low heavy metals, extra low chloride.**

SICO-UP is a NP water soluble fertiliser with acid reaction for fertirrigation with high amounts of nitrogen and phosphorus. It **features a high degree of purity and solubility**; the acid reaction favors absorption of N and P as well as the other nutritive elements present in the soil or added to the mixture. Nitrogen is present in ureic form and phosphorus is totally water soluble.

Plants absorb phosphorus mainly as monovalent phosphate ions (H<sub>2</sub>PO<sub>4</sub>). Those ions are generally easily fixated in the soil. SICO-UP will keep the phosphorus free in the soil solution, making P more available for the plant.

Due to its acidic character SICO-UP will increase the nutrient uptake efficiency.

## 2. PRODUCT SPECIFICATIONS & CHEMICAL ANALYSIS

	Standard specification	Typical analysis (results of inspection of production batch dd 7/04/2014)
Main content	min. 98.0 %	99.88 %
Total Nitrogen (N)	min. 17.0 %	17.41 %
Ureic Nitrogen (NH <sub>2</sub> )	min. 17.0 %	17.41 %
Phosphorus Pentoxide (P <sub>2</sub> O <sub>5</sub> )		
soluble in neutral ammonium citrate	min. 44 %	44.85 %
soluble in water	min. 44 %	44.85 %
Moisture content (as H <sub>2</sub> O)	max. 0.5 %	max. 0.20 %
Ph (1% water solution)	1.6 – 2.4	1.75

## 3. PRODUCT CHARACTERISTICS

- Crystalline product, fully water soluble.
- Can be used mainly in fertigation and as an ingredient of water soluble NPK.
- Compatible with most water soluble fertilisers.
- Low on sodium, chloride or other detrimental elements to plants.
- Mainly used on field crops and fruit trees. Its use in certain situations and on vegetables can be a way to get an earlier production in calcareous soils.
- Source of phosphate particularly effective in alkaline soils. If particular interest at the beginning of growth to develop the root system.
- Use with hard water prevents clogging and deposits in the irrigation system.

## 4. ADVANTAGES

- Due to its acidic nature, SICO-UP improves the P<sub>2</sub>O<sub>5</sub> availability, and increases solubility of Zn, Mn, Fe and Cu in alkaline conditions, making these trace elements more available for the plant.
- SICO-UP prevents precipitation of Ca and Mg.
- SICO-UP can be used during the entire growth period, and is particularly beneficial during the first growth stage when roots need a high amount of P to form a wide and efficient root system.
- SICO-UP has a strong anti-scaling property, keeping nutritional solutions and drip irrigation lines free from inorganic deposits.
- Can be used in Ca and Mg containing NPK's.

- **Enhances the availability of P<sub>2</sub>O<sub>5</sub>**
- **Avoids inorganic scaling in the drip system**
- **Enhances availability of trace elements, calcium and magnesium**



**PRODUCT INFO  
& DATASHEET**

## 5. RECOMMENDED APPLICATIONS & DOSING INSTRUCTIONS

### \* USE

#### a. Fertigation

Crop	Total dosage in kg/ha	Application date
Fruit trees (adult trees)	100-200 kg	As a start of fertigation until 4 to 6 weeks before harvesting.
Vineyards (adult table grapes)	50-200 kg	As a start of fertigation/early stage of bud opening until end of flowering period.
Citrus	150-250 kg	During entire crop cycle, with dominance on spring and mid winter.
Vegetables	100-200 kg	As of planting until 3 to 4 weeks before harvesting. Depending of crops.
(processing) vegetables * potatoes * tomatoes	100-200 kg 150-250 kg	As of start of fertigation until mid of tuber bulking stage. As of start of fertigation until 6 weeks before harvesting.
Banana	200-300 kg	During entire fertigation period.

#### b. Foliar

Crop	Application date	Dosage in kg/application	Concentration of spray solution
Apple, pear	1-2 applications after end of flowering	1-2 kg/ha*	0.1-0.15% (w/v)
Stone fruits	1-2 applications from fruit growth until 25-30% of final fruits size	1-2 kg/ha*	0.1-0.15% (w/v)
Citrus	1-2 applications fruit development stages	2-3 kg/ha*	0.1-0.2% (w/v)
Olive	1-2 applications before flowering induction until fruit setting	2-3 kg/ha*	0.1-0.2% (w/v)
Vegetables	In case of additional Phosphate needs. As of first vegetative stage until 4-6 weeks before harvesting.	1-2 kg/ha*	0.1-0.15% (w/v)

\* The dosage is subject to the amount of water used. We recommend small amounts and concentrations, depending on the pH of water used.

### \* COMPATIBILITY

SICO-UP Phosphate is compatible with most commonly used fertilisers, except calcium (eg SICALNIT Calcium Nitrate) and magnesium (eg SICO-MAGNIT Magnesium Nitrate) fertilisers. Therefore the use of a separate tank is needed or fertilisers should be applied on different times.

It is compatible with pesticides, though it is advisable to confirm compatibility of your intended spray-mix by preparing a sample of the spray materials at their recommended concentrations in order to rule out the possibility of a detrimental cross reaction. This mixture should be sprayed onto small area prior to commercial treatment, in order to assess whether an adverse effect occurs.

The mentioned indicated dosage and application stages are subject to soil and climatic conditions, possible use of manure, influence of previous crops and other specific conditions. Exact dosages and application stages can only be given after an objective diagnostic procedure by e.g. soil and plant analyses by your local agronomist.

## 4. PACKING

25 kg woven Sico bag lined with plastic bag, 25 MT/20 ft container (loose bags) (or 24 MT/20' fcl if bags on heat treated pallets) or 1000 kg big bags.

## 5. STORAGE & SHELF LIFE

Min. 2 years if stored dry, dark, away from direct sunlight. Keep bags hermetically closed.